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Smith, Linda Dease, Ed.D.

The University of North Carolina at Greensboro, 1990

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COLLEGE CAREER PLANNING AND EMPLOYMENT PROFESSIONALS: A PROFILE AND COMPARISON OF THEIR PERSONALITY TYPE WITH THEIR DEMOGRAPHIC PROFILE AND WITH THEIR PROFESSIONAL ORIENTATION

by

Linda D. Smith

A Dissertation Submitted to
the Faculty of the Graduate School
The University of North Carolina at Greensboro
In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

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1990

Approved by

David H. Reilly
Dissertation Advisor

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

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ABSTRACT

LINDA D. SMITH. Ed.D. College Career Planning and Employment Professionals: A Profile and Comparison of their Personality Type with their Demographic Profile and with their Professional Orientation. (1990). Directed by Dr. David H. Reilly. 152 pp.

The purpose of this research was: to determine whether a consistent profile exists among Career Planning and Employment (CPE) professionals in terms of demographic data, professional orientation and Myers-Briggs Type; to examine whether there were significant differences between CPE professionals's demographic profile and Myers-Briggs Type; and to examine whether there were significant differences between CPE professionals' Myers-Briggs Type and professional orientation.

A self-designed CPE Questionnaire and Form G of the Myers-Briggs Type Indicator were used on a sample of 119 CPE professionals representing four-year, public institutions in the Southeast.

CPE professionals were most likely to be directors, in their current positions from less than one year to five years, and in the profession from one to five years or 16 years or more. Of the six professional orientations, (Administration, Counseling, Marketing, Teaching, Research, and Technology), CPE professionals liked Marketing and Teaching most and Technology least. They were most likely to hold a Master's degree followed by an earned Doctorate and slightly more likely to be female than male. The most frequent Myers-Briggs types were ESTJ, ENTJ, ISTJ, and

ENTP. Of the eight MBTI preferences, they were more likely to be E, N, T, and J; and of the four MBTI combinations of perception and judgment, they were typically NT followed by ST.

The chi-square test of independence showed that there were no significant differences among CPE professionals' Myers-Briggs Type and the demographic variables except for the S-N and J-P variables and number of years in current position, number of years in CPE profession and sex.

The longer CPE professionals had been in their current positions and the longer they had been in the profession, the more likely they were to be S over N and J over P.

Females were twice as likely to be N as S, while males were more likely to be S. Males were twice as likely to be J while females were only slightly more likely to be J.

The chi-square test of independence showed that there were no significant differences between CPE professionals' preferred professional orientation and Myers-Briggs type.

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CHAPTER ONE

INTRODUCTION

The purpose of this study was to determine whether a consistent profile exists among career planning and employment (CPE) professionals. The profile consists of position, length of time in current position, length of time in CPE profession, age, educational level, sex, professional orientation, and personality type. CPE is one of the student services typically offered by institutions of higher education. The expansion of services offered by CPE offices in the past 15 years (CPC, 1988) has resulted in an increase in the variety of functions performed by CPE professionals. In addition to developing a CPE profile, this study examined the relationship between CPE professionals' profile and their personality type as measured by the Myers-Briggs Type Indicator (MBTI) and the relationship between CPE professionals' professional orientation and their MBTI personality type. Professional orientation is defined as a preference for performing specific functions in the delivery of CPE services and it represents a preference for specific aspects of the CPE profession as a career choice. The relationship of career choice and personality were examined as developmental processes.

THEORETICAL BASE

The theoretical base for this study includes theories of development, personality and career development. A discussion of Jungian psychological types as a basis for the Myers Briggs Type Indicator is also provided.

Developmental Theory

"Development can be described as a rhythmic flow of quantitative and qualitative changes proceeding in specific directions in a predictable sequence" (Garrison & Jones, 1969, p. 45). Quantitative changes involve growth in size and structure such as height and weight, while qualitative changes are more complex and trace the growth of intelligence, creativity, sociability and morality (Papalia & Olds, 1981). Developmental theory deals with the assumption that human beings are continuously changing from conception to death; that people develop bit by bit; and that each step is the basis for each succeeding step (Garrison & Jones, 1969). The study of human development began with children, then included adults, and eventually dealt with the entire life span from conception to death.

According to Papalia & Olds (1981), the theories of human development can be divided into four categories based upon four perspectives of humankind: mechanistic, organismic, psychoanalytic and humanistic. The learning

theories of Pavlov, Skinner and Watson are mechanistic and based on the belief that human beings learn the same way lower animals do, by reacting to the rewards and punishments of their environments. Piaget's theory of cognitive development and Kohlberg's theory of moral development are examples of organismic theory in which people are viewed as active organisms who initiate action and change. The psychoanalytic theory of Freud holds that people are always in a state of flux between their natural instincts and societal constraints. Freud's theory was extended by Erikson's interest in society's influence on development. Finally, the humanistic theories of Maslow and Buhler emphasize the ability of individuals to take charge of their own development.

Personality Theory

Personality development encompasses some of the qualitative changes tha. take place in an individual's development. "Personality is the pattern of behavior and thought that characterizes individuals and remains relatively stable throughout their lives" (Ambron & Brodzinsky, 1982, p. 270). Two major theories of personality development are the psychosexual theory of Freud which stresses the biological determinants of behavior and the psychosocial theory of Erikson which looks to the cultural and societal influences on developing

personality (Papalia & Olds, 1981). Pioneers in the field of personality are Sigmund Freud (psychoanalytic psychology), Alfred Adler (individual psychology) and Carl Jung (analytic psychology). Other theories include neo-Freudian psychology based upon the work of Fromm and Sullivan and the self-actualizing theories of Maslow and Rogers (Garrison & Jones, 1969).

According to Ambron & Brodzinsky (1982), personality is part of the psychosocial development of an individual. "Psychosocial development describes the personality and emotional structures of individuals, as well as their usual ways of interacting" (p. 4). This includes the way people relate to jobs and to coworkers as well as the assumption of social roles. The study of personality is concerned with the development of individual differences. Thus, personality develops as the individual develops, is influenced by heredity and environment, and is related to the developmental tasks of the individual.

Career Development Theory

Career development theory seeks to explain the how and why of certain life sequences that influence the selection of careers. Career choice is a developmental process reaching well back into the early years (Stephens, 1970). Parsons (1909) developed the first theory of vocational choice which received widespread attention. His theory

contained three steps which are still the basis for much career counseling today: self understanding, knowledge of the world of work, and matching individual qualifications to job requirements. Other theories of career development include Ginzberg, Ginsburg, Axelrod and Herman's (1951) three major concepts of process, irreversibility and compromise; Holland's (1966) identification of six types of persons and corresponding work environments; and Super's (1957) theory of career development as an expression of an individual's self concept.

Summary

In human development we can look at various types of development - physical, cognitive and psychosocial. Each theory of human development has its own definition of the developmental tasks and stages of individuals including how and when personalities and career choices are developed. There is evidence however that personality (Ambron & Brodzinsky, 1962; Garrison & Jones, 1969; Papalia & Olds, 1981) and career choice (Ginzberg, et al, 1951; Holland, 1966; Super, 1957) are part of the developmental process of an individual. As an individual develops physically his/her personality also develops and is influenced by both heredity and environment. Vocational interests are expressions of personality. Career development theory requires an understanding of personality and how personality relates to the world of work.

One can expect to find relationships between personality and vocational preferences. Members of a vocation tend to have similar personalities and similar histories of personal development (Holland, 1966). In looking at career choice as an expression of an individual's personality, we can examine different personality theories in terms of their contributions to career development. This study examined Carl Jung's personality theory in light of its relationship to career choice.

Jung's Theory and the Myers Briggs Type Indicator

Jung's theory of analytical psychology seeks to understand the structure, psychodynamics and unfolding of the human psyche (1954). His structural model of the psyche includes four main entities: the psychodynamic self which includes activities of personal and collective unconscious; complexes; the ego with two basic attitudes toward life, extraversion and introversion; and archetypes. (Note: Extraversion is spelled with an "a" because Jung used this spelling in his writings and this spelling is used in the literature on the Myers-Briggs Type Indicator).

Jung's discovery and classification of different psychological types is the major focus of this study. Jung (1923) identified two general attitude types or

orientations to life, introverted and extraverted. The introverted attitude draws energy from the environment. With the extraverted attitude, attention flows out to the objects and people of the environment. According to Jung's theory of psychological types (1923) there are four basic mental processes: sensing, intuition, thinking and feeling. All four are used by everyone, but individuals do not prefer and/or develop each one equally. The essence of Jung's theory of psychological types is that much apparently random behavior is actually consistent and orderly, being caused by different manners of expressing perception and judgment (Myers & McCaulley, 1985).

The Myers Briggs Type Indicator was developed as a practical application of Carl Jung's theory of type (Lawrence, 1979). "Jung described the Extravert-Introvert (E-I), Sensing-Intuition (S-N) and Thinking-Feeling (T-F) explicitly in his work; the importance of judgment and perception was implicit in Jung's work and was made explicit by Isabel Myers and Katharine Briggs in the development of the MBTI" (Myers & McCaulley, 1985, p. 13). Type as indicated by the MBTI is a combination of four preferences from the four dichotomies listed above (E-I, S-N, T-F and J-P). Combinations of these four preferences as exhibited by each person result in sixteen possible types. Jung's theory of psychological types which formed the basis for the development of the MBTI as a practical

application of the theory can be important in career choice because it provides individuals with an understanding of their interests and preferences and of the effect of these on work settings (Myers & McCaulley, 1985).

Summary

The MBTI provides a framework for understanding and coping with the variations in behavior in people that are due to a few basic observable preferences. These preferences are demonstrated in career choice and in the choice of work settings and work tasks. "...One of the most important motivations for career choice is a desire for work that is intrinsically interesting and satisfying and that will permit use of preferred functions and attitudes..." (Myers & McCaulley, 1985, p. 77).

Statement of Problem

Typically, the college career planning and employment office has evolved from that of a placement bureau (previously run by a faculty member) to a complex, computerized office run by professionals usually trained in counseling, education, or business (CPC, 1988). The CPE services have grown from matching graduating seniors with employers to counseling and assisting students from their freshman through their senior years and even as alumni. "As reflected by current office titles, career planning and placement centers continue to move toward a more comprehensive role than a strictly placement function. The number of offices with just `placement' as their titles decreased by 19.2 percent since 1975. Overall, 58.1 percent of the offices had the word `career' in their titles by 1987 (CPC, 1988). Research in the field has concentrated on the services provided, and on the job market rather than on the personnel in the profession.

The problem was to determine whether a consistent profile exists for career planning and employment professionals in higher education institutions in terms of position, length of time in current position, length of time in the CPE profession, age, educational level, sex, (demographic profile), professional orientation, and personality type as measured by the Myers-Briggs Type Indicator; to determine if there were significant

differences between the demographic profile and personality type for CPE professionals; and to determine if there were significant differences between personality type and professional orientation for CPE professionals.

Questions/Hypotheses

The specific questions addressed in this study were:

1. Does a consistent profile exist among members of the career planning and employment profession in terms of position, length of time in current position, length of time in the CPE profession, age, educational level, and sex (demographic profile), professional orientation, and personality type as measured by the Myers-Briggs Type Indicator?

2. Are there statistically significant differences for CPE professionals between the demographic profile (position, length of time in current position, length of time in the CPE profession, age, educational level, and sex) and personality type?

3. Are there statistically significant differences for CPE professionals between personality type and professional orientation?

Purpose/Rationale of Study

There is a need to gain greater insight into the career planning and employment profession by gaining increased knowledge and understanding of the professionals in the field. The specific purposes of this study were the following: (1) to develop a descriptive profile of college career planning and employment professionals including position, length of time in current position, length of time in the CPE profession, age, educational level, sex, professional orientation, and personality type as measured by the Myers-Briggs Type Indicator; (2) to determine if there were significant differences between the demographic profile and personality type of CPE professionals; and (3) to determine if there were significant differences between preferred professional orientation and Myers-Briggs Type for CPE professionals. The information gained from this study should be useful for advising those interested in the career planning and employment profession; for staff development purposes within existing career planning and employment offices; to add to the body of knowledge on the career planning and employment profession; and to add to the body of knowledge on the MBTI.

Limitations of the Study

The sample was limited to members of the Southern College Placement Association. Since this is a select group, the results may not be replicable to other populations.

CHAPTER TWO

REVIEW OF THE LITERATURE

This section addresses briefly the background research on theories of development, personality and career development as well as the current status of career planning and employment in higher education. The focus of the review is on the Myers-Briggs Type Indicator and its relationship to career choice.

Developmental theory. Development, although related to chronological age, is generally a matter of individual differences. Individuals proceed through a variety of stages physically, emotionally, socially, intellectually, and vocationally. Havighurst (1953) lists developmental tasks for different life periods or life stages. Some of these tasks are common to all cultures and appear at approximately the same time in different cultures, such as learning to walk. These tasks are closely associated with man's physiological characteristics and physical structure. Other tasks are closely interwoven with specific cultures, such as the age for choosing an occupation and entering the working world, which varies from culture to culture (Garrison & Jones, 1969). Some tasks need to be learned only once, such as walking, while

others are learned gradually over a long period of time, such as the development of values and attitudes.

According to the life stage approach to developmental theory, life can be divided into different stages such as Erikson's eight stages (Papalia & Olds, 1981). There are certain factors and conditions that influence changes at each of the different stages, and at different stages in development, certain traits stand out more conspicuously than others. This makes it possible to mark off major periods, each of which is characterized by a certain form of development distinguishing it from other periods (Garrison & Jones, 1969). Life is not viewed as a series of stages, however, because there is basic continuity in patterns of growth. Any stage in life can best be understood and appreciated when seen in the context of what has gone before and the pattern of growth that will likely follow (Garrison & Jones, 1969). "The developmental tasks for each age level are not discrete, rather the tasks of a later period are a continuation of tasks learned earlier" (Garrison & Jones, 1969, p. 306). There are, however, developmental tasks and problems that are somewhat characteristic of each stage.

Personality theory. Personality theory examines personality in terms of its impact on others, the individual's structuring of or adapting to his/her

environment, or the individual's perception of him/herself. Allport (1937, p. 48) defines personality as "the dynamic organization within the individual of those psychophysical systems that determine his unique adjustment to the world," with the psychophysical systems being defined as attributes such as temperament, trait, character, mood, disposition, trend, habit, and attitude. Allport (1937) also divided definitions of personality into five types: those dealing with the "sum total" of a person; those that arrange personality traits into some orderly manner; those that view traits as stages of development appearing in a fixed order; those that view the individual as trying to adjust to the world; and those that stress individual uniqueness. Corsini (1977) contends that all personality theories help us understand how we become and remain ourselves. Character and personality develop gradually through the interaction of heredity and environment (Garrison & Jones, 1969). Each individual personality develops under the influence of factors such as social history, cultural influences, a person's particular situation and biological factors (Ambron & Brodzinsky, 1982). Erikson's (1968) theory holds that each stage of development involves a crisis in psychological development. The crises according to Erikson (1968, p. 303) are:

Basic trust vs basic mistrust (1st year of life)

Autonomy vs shame and doubt (2nd year)

Initiative vs guilt (preschool)

Industry vs inferiority (middle childhood)

Identity vs role confusion (adolescence)

Intimacy vs isolation (young adulthood)

Generativity vs stagnation (prime of life)

Ego integrity vs despair (old age)

Background research on career development. From the early days of career development theory (Parsons, 1909) to the more recent theories of Holland (1966) and Super (1957), the underlying principles of understanding one's self, understanding the world of work, and the ability to see the relationship between self-understanding and the world of work have prevailed. Parsons (1909) stated "If a young man chooses his vocation so that his best abilities and enthusiasms will be united with his daily work, he has laid the foundations of success and happiness" (p. 3). Parsons was a pioneer in career development theory. His theory of vocational choice contained three steps of career development which are relevant today:

(1) self-understanding - knowledge of interests, aptitudes, resources and limitations

(2) knowledge of the world of work - aptitudes, skills and educational background required as well as salary and opportunities for advancement

(3) matching of the two - a look at how individual qualifications match up with job requirements

Very little was contributed toward the advancment of career development theory until the early 1950's when Ginzberg, Ginsburg, Axelrod and Herman (1951) developed their theory of occupational choice. Their theory attempted to explain how the multiplicity of factors within the environment and forces within the individual act and react on each other until the individual resolves the problems of his vocational choice. Three major concepts of Ginzberg's, et. al., theory are process, irreversibility and compromise. Career development is a process because it changes over time and these time periods may be divided into various life stages. The life stages include the fantasy stage when children believe they can become whatever they desire; the tentative stage in which young adults begin to develop values, interests, qualifications, and a more stable personality; and the realistic stage in which the individual integrates interests, capabilities, and values. The concept that choices are irreversible implies that each decision is related to one's past experiences, which in turn influences the future, thus the irreversibility of the decision making process. The compromise involves choosing a career that offers the most in terms of needs, interests, values, etc. in light of real environment career alternatives.

Holland (1966) regards interests and vocational preferences as expressions of an individual's personality

and personal development. Thus, vocational interests represent the expression of personality at work, and vocational choices are outcomes of an individual's life history rather than a decision independent of his/her past life. The choice of an occupation is an expression of an individual's motivation, knowledge of a particular occupation and personal abilities. To the extent that the worker's personality and work environment are congruent, then increased satisfaction, stability, and achievement in relation to vocational choice will result. Holland identifies six types of persons and corresponding work environments: Realistic,
Intellectual, Social, Conventional, Enterprising, and Artistic. Individuals make career choices and search for work environments that satisfy their personal orientations (Holland, 1966).

In Super's (1957) theory a career is a way of life as "work and occupation play an important part in determining the social status, values, attitudes and style of living of an individual" (p. 35). Personality, in terms of role expectations, needs and preferences, is related to Super's theory of self concept and careers. His theory is based on the idea that an individual implements the self concept through the sequence of occupations pursued during his/her lifetime. His theory holds that vocational choice is a process rather than an event and that it is the end product

of an individual's ideas, ideals, attitudes, interests, experiences, and abilities over a considerable period of time. The self concept continues to grow and change as the career develops. He sees career development as progressing through a series of distinct stages: growth, exploration, establishment, maintenance, and decline (later changed to disengagement). Within this framework work satisfaction is dependent upon adequate opportunities to develop interests, to sharpen abilities, to refine personality traits, to develop a system of values--all of which become ingredients of one's concept of self. Fulfillment of self concept through vocational choice is essential to the well-being and happiness of the person.

Current status of career planning and employment in higher education. CPE offices have evolved from a strictly placement function to a more comprehensive service. The move to a more comprehensive service encompasses the career development concepts of self exploration, career exploration and the matching of the two in the placement function. This change is reflected in the trend away from the use of `placement' alone in the name of the office to the use of the terms `career planning/development/ services/ employment' along with placement (CPC, 1988). Administratively, almost three-fourths of CPE offices are located within the student development division (CPC, 1988) although historically they have been located in a variety

of administrative and academic areas. Since student development divisions are typically proponents of student development theory this again reflects a developmental approach to career choice (Delworth, Hanson & Associates, 1980). According to the Council for the Advancement of Standards for Student Services/Development Programs (1986), the primary purpose of CPE offices is to assist students in developing, evaluating, and effectively initiating and implementing career plans. The services offered by CPE offices have expanded a great deal in the past 15 years. Since 1971 the greatest increase overall (27.7 percent) has been in the cooperative education, intern and experiential education program offerings (CPC, 1988). Since 1981 there has been an increase in the percentage of offices offering resume referral (10.2 percent). Ninety percent of the respondents use computer technology in their CPE operations with slightly more than 80 percent using personal computers in their offices.

The professionals in the field include persons holding the positions of director; associate or assistant director; career counselor or alumni career counselor; student employment coordinator or job developer; internship, cooperative education or experiential education coordinator; occupational/career librarian; and placement coordinator. Grant and Foy (1972) in a survey of student personnel professionals found that the majority had a

master's degree as their highest level of educational achievement while 38 percent had a doctorate. Most had spent an average of six years in student personnel work with females having spent seven years and males five years. The mean age of this group was 38, with women slightly older (41) and men slightly younger (37). A survey of CPE professionals conducted by the College Placement Council (1988) found that the majority of directors (86 percent) had at least a master's degree and 15 percent had a doctorate. This survey also revealed that slightly more than 50 percent had been in the CPE profession for eight years or less.

As the services offered by CPE offices have expanded, they require an increasing variety of skills on the part of the professionals in the field. The services currently offered by CPE offices involve a variety of functions such as counseling, marketing, and computerization and the professionals providing these services must be skilled in these different areas.

Myers Briggs Type Indicator.

History. "Widely available only since 1975, the MBTI is currently employed as a counseling tool for self-understanding and in career planning; as a technique for improving educational practice through an understanding of type differences in teaching and learning styles; and as

a device for working with families and groups to improve communications, teamwork, and leadership" (McCaulley, 1981, p. 295). A great advantage of the MBTI according to McCaulley (1977) is that it is concerned with valuable differences in normal people.

The MBTI was developed by Katharine Briggs and her daughter, Isabel Myers. Briggs was a people watcher who became very interested in personality differences. She developed her own typology from her knowledge of others and from biographies. When Jung's Psychological Types was published in 1923, she realized that his theory of personality types was congruent with hers. Since Jung's theory was much more complete than her own, she destroyed her notes (APT workshop, 1989) and began to study his theory. She taught Jung's theory to her daughter and for over twenty years they were serious type watchers (McCaulley, 1981). The MBTI was developed in a series of stages beginning in 1942 when Briggs began to consider specific questions for possible use in its creation. In 1962 the Educational Testing Service published the instrument for research purposes only. In 1975, the Consulting Psychologists Press began publication and distribution of the MBTI for professional applications.

Jung's Theory and the MBTI. Swiss-born C. G. Jung suggested that human behavior is predictable rather than random. According to Jungian theory, individuals are born

with a predisposition for certain personality preferences. Differences in behavior are a result of preferences related to the basic functions that an individual's personality performs throughout life. These preferences, which emerge early in life, form the foundation of an individual's personality and become the core of an individual's attractions to and repulsions from people, tasks, and events (Kroeger and Thuesen, 1988). Jung's theory of psychological type is based on valuable differences predictably resulting from a preference for and development of opposite kinds of perception, opposite kinds of judgment, and opposite ways of using the processes preferred (McCaulley, 1977). Jung (1923) referred to extraversion and introversion as general attitudes and he also identified four basic psychological functions: sensing, intuition, thinking, and feeling. Sensing and intuition are two kinds of perception; thinking and feeling are two kinds of judgment. Sensing is perception transmitted via the sense organs and `bodily senses'..." (Jung, 1923). Intuition is "the psychological function which transmits perceptions in an unconscious way" (Jung, 1923, p. 568). With thinking judgment, ideas are linked by making logical, impersonal connections. With feeling judgment, one comes to decisions by weighing relative values and merits of issues in a subjective manner.

Design of Instrument. Myers and Briggs "set out scientifically rigorous and reliable terms, differences according to Jung's Theory of Personality Preferences" (Kroeger & Thuesen, 1988, p. 8). The instrument was designed specifically to make Jung's theory of psychological types understandable and useful in people's lives. The MBTI was created with the idea that it could be used to establish individual's preferences and then to promote the constructive use of differences between people (Kroeger & Thuesen, 1988). The MBTI consists of four scales or indices: Extravert-Introvert (E-I), Sensing-Intuition (S-N), Thinking-Feeling (T-F), and Judging-Perceiving (J-P), each representing a dichotomous preference. The Extravert-Introvert, Sensing-Intuition, and Thinking-Feeling scales are explicit in Jung's theory. The fourth scale, Judging-Perceiving, is implied in his theory and was developed by Myers in order to permit the identification of the dominant preference of each type. A description of the four indices follows:

Basic orientation to life

Extraversion - attention flows out to objects and people; desire to act on environment, affirm its importance and increase it

Introversion - energy flows from object back to subject; energy abstracted from environment and conserved by consolidating it within one's own position

Perceptive functions

Sensing - perceive the observable by way of senses

Intuition - perceive meanings, relationships, possibilities by way of insight

Judgment functions

Thinking - logical decision-making process aimed at impersonal findings

Feeling - process of appreciation, making judgments in terms of a system of subjective, personal values

Attitudes

Judging - prefer to deal with activities mainly be means of preferred judging process (thinking or feeling)

Perceiving - prefer to deal with activities mainly by means of preferred perceiving process (sensing or intuition)

The addition of the Judging-Perceiving dichotomy by Myers expanded Jung's eight types to 16 types as seen on the type table (Figure 1). Myers wrote separate descriptions for each of the 16 types. The descriptions are stated primarily in positive terms, showing each type at its highest development. Each description also includes a statement of difficulties types may encounter if the auxiliary is not developed (Myers, 1977).

No one preference or type is thought of as being qualitatively superior to another. Each simply reflects differences in attitude, orientation, decision-making, and the relative importance of these functions in a person's life. Jung viewed type development as a lifelong process.

"Myers and Briggs assumed that in each individual `true preferences' on each of the Jungian dichotomies actually exist, and the task of the MBTI is to give an individual the opportunity to report them" (McCaulley, 1981, p. 308).

Dominant, Auxiliary, Tertiary and Inferior Functions. Type is not a static definition but rather a dynamic description in which each of the dichotomies modifies the effects of the others in predictable ways (McCaulley, 1981). For each type, one of the four functions (S-N and T-F) is the dominant function, one is the auxiliary function, one is the tertiary function and one is the inferior function.

One of the four functions becomes dominant in an individual because of an inborn predisposition (Myers & McCaulley, 1985). In the course of normal development, the activities of that function are more interesting and rewarding to the individual (McCaulley, 1981). As an individual develops his/her preferred function, he/she develops increasing skill and satisfaction in the domains governed by the dominant function. Thus, the characteristic attitudes, habits, skills and traits associated with that function begin to appear and behavior becomes more predictable (McCaulley, 1981).

A second or auxiliary function is developed to complement the dominant function. If a perceiving function is dominant, an auxiliary judging function will develop to

Figure 1 Type Table for the MBTI

SENSING TYPES with THINKING	SENSING TYPES with FEELING	INTUITIVE TYPES with FEELING	INTUITIVE TYPES with THINKING	
ISTJ N = % =	*ISFJ* N = % =	*INFJ* N = % =	*INTJ* N = % =	JUDGING
ISTP N = % =	*ISFP* N = % =	*INFP* N = % =	*INTP* N = % =	PERCEPTIVE
ESTP N = % =	*ESFP* N = % =	*ENFP* N = % =	*ENTP* N = % =	PERCEPTIVE
ESTJ N = % =	*ESFJ* N = % =	*ENFJ* N = % =	*ENTJ* N = % =	JUDGING

INTROVERTS

EXTRAVERTS

provide balance and vice versa. In addition to providing a balance between perception and judgment, the auxiliary function provides a balance between introversion and extraversion. Members of each type will primarily use their first or dominant function in their favorite attitude (introversion or extraversion) and they will primarily use their auxiliary function in the opposite attitude.

The third and fourth functions are called tertiary and inferior functions. These two functions are the least preferred and typically are developed in mid-life (Myers & McCaulley, 1985). The tertiary function is the function opposite the auxiliary and the inferior function is the one opposite the dominant.

MBTI and the U.S. Population. Myers (Myers & McCaulley, 1985) made the following estimates of type in the general population:

-about 75 percent of US population prefer E
-about 75 percent of US population prefer S
-about 60 percent of males in US prefer T
-about 65 percent of females in US prefer F
-about 55 percent to 60 percent of US population prefer J.

Data from the Center for Applications of Psychological Type (CAPT) show certain trends in type distributions of populations. These include that females have relatively more F types and males have relatively more T types. The STJ types are more frequent among males and the SFJ types

are more frequent among females. The IN types are relatively rare, but their numbers are more frequent at higher educational levels (Myers & McCaulley, 1985).

Education and the MBTI. Research on type and education reveals that grades K-6 are geared toward hands-on learning and are thus more Sensing oriented. The learning of theory increases around 7th grade, intensifies in college and peaks in graduate school (Kroeger & Thuesen, 1988). Accordingly, data show that grade school teachers are about two-thirds Sensing, high school teachers are evenly split between Sensing and Intuition and college faculties are about 70 percent Intuitive with some graduate school faculties as high as 77 percent Intuitive (Kroeger & Thuesen, 1988). This is significant when compared to the U.S. population as a whole which is 70-75 percent Sensing (Myers & McCaulley, 1985). Samples of teachers are typically split (50-50 for E-I and have more F's than T's. The S-N teaching-learning dichotomy results in the S's becoming the doers of the various disciplines - the doctors, grade school teachers, engineers and lawyers - and the N's becoming the teachers of medicine, education, engineering and law (Kroeger & Thuesen, 1988). Samples of both education administrators and teachers have more J's than P's and more T's than F's (Macdaid, 1986).

According to Macdaid (1986) some of the theoretical expectations regarding the MBTI and higher education are

that the proportion of Introverts will increase at higher levels of education because higher education is more concerned with concepts and ideas and is more attractive to I's; the proportion of N's will also increase at higher levels of education because of the concern with theory, abstraction and symbols; and the proportion of J's will increase because J's, who are relatively more persistent, organized, and goal-directed, are more likely to succeed and less likely to drop out.

Careers and the MBTI. Specific types have been found to cluster within creative, scientific, business, and social occupations. "The basic assumption when using the MBTI in career counseling is that one of the most important motivations for career choice is a desire for work that is intrinsically interesting and satisfying and that will permit use of preferred functions and processes" (Myers & McCaulley, 1985, p. 77).

Type distributions of samples of persons actually in careers contribute to the construct validity of the MBTI, insofar as it can be shown that people tend to choose careers which, in theory, should attract their type. In numerous studies cited by McCaulley (1981) the following patterns of MBTI and career choice were found:

-business attracts practical and matter-of-fact ST types as well as realistic and extraverted ES types

-science and mathematics appear to attract logical and ingenious NT types, especially INTJ and INTP

-engineering tends to attract tough minded TJ types, with sensing types more attracted to the applied fields of civil and industrial engineering and intuitive types more attracted to chemical and nuclear engineering

-TJ's are more significantly attracted to law and less likely to drop out of law school

-the humanistic, enthusiastic and insightful NF's are significantly attracted to the humanities, arts, counseling, psychology, psychiatry and journalism

-the sympathetic and friendly SF types tend to be attracted to elementary school teaching

-judging types are in the majority among business executives, school principals, police officers and other fields where decisiveness is required

"The significant patterns of career choice described above are given as evidence that, in the uncontrolled experiment of life planning, people do move in directions predicted by Jung's theory. The Center for the Applications of Psychological Type has collected data on occupations and on type which show that all occupations for which they have information have individuals from all sixteen types but that each occupation attracts some types more than others (Myers & McCaulley, 1985).

As managers and supervisors, there tend to be more Thinking and Judging types. "Sixty percent of the upper management of any organization tend to be Thinking-Judgers; the higher you go in the organization, the more likely that is to be true" (Kroeger & Thuesen, 1988, p. 97). Even in

organizations that are overwhelmingly feeling, TJs's rise to the top. In the clergy for example, most bishops are TJ's (Kroeger & Thuesen, 1988). The Thinking-Judging dimension allows for organization, objectivity, and carry-through in making important decisions whether they involve people's lives, money or careers.

Craig, Craig & Sleight (1988) compared a sample of 70 speech pathology and audiology supervisors functioning in professional clinical settings to a sample of 152 speech pathology and audiology graduate students. The sample of graduate students showed the expected overrepresentation of feeling types, while there was a strong overrepresentation of TJ types in the sample of supervisors. These findings suggest that the preponderance of TJ's among supervisors is likely to occur regardless of whether the setting is corporate or clinical.

Type theory assumes that people differ in the ways they like to use their minds, and that these differences influence the way people like to work, what motivates them, and what satisfies them. The MBTI is most useful in helping a person find a match between these cognitive/motivational styles and the opportunities offered by occupations and work settings. Thus in theory, the frequent types are those who would like the work of that occupation (Macdaid, 1986).

In addition to analyses of individual types, groupings of types are often used for specific predictions. Any grouping of types at the present time can be considered a temporary stage of development until more precise data are available for each of the 16 types (McCaulley, 1981).

Careers and Eight Preferences. Every career requires some of each of the eight preferences (E/I, S/N, T/F and J/P). For example, research is primarily an I activity in the striving for discovery but extraversion is needed to sell the findings (Kroeger & Thuesen, 1988). Tough-minded executive decisions require objective directed action which are TJ traits, but sensitivity to people and flexibility to make adjustments as situations demand are also necessary to be effective (Kroeger & Thuesen, 1988). A synopsis of how these eight preferences are applicable to the work that people choose, the work setting that maximizes their strengths, the kinds of workers with whom they feel most congenial and productive, and typical careers for these types follows (Hirsch & Kummerow, 1989; Kroeger & Thuesen, 1988; Myers & McCaulley, 1985).

Extravert-Introvert (E-I)

E - jobs that involve working primarily with others, especially if they involve selling, persuading and motivating

-work setting that is activity oriented, has variety, and allows for frequent and regular interaction with others

-jobs such as consultant, marketer, sales manager

I - jobs that involve primarily working alone or being accountable to oneself

-work setting that is quiet and private and allows for reflection and indepth concentration on concepts and ideas

-jobs such as computer programmer

Sensing-Intuition (S-N)

S - jobs where short-term tangible results and bottom line are driving forces

-work setting that produces practical, useful products or services for people or the organization and the opportunity to work carefully with people, things, data

-jobs such as accountant, mid-level manager, trial law, and civil engineering

N - jobs where possibilities, ideas, and longer-term goals are important

-work setting where future needs and new possibilities for people, things, and data are important; opportunity to continually learn to do new things is important

-jobs such as consultant, counselor, journalist, psychologist, writer, financial planners, law professors and architectural engineers

Thinking-Feeling (T-F)

T - jobs that do not require a lot of interpersonal relationships but do require objectivity and use of logical and impersonal analysis

-work setting that is more impersonal and governed by logic

-jobs such as auditor, computer systems analyst, manager, systems researcher, journalism, high tech research, and stock broker

F - jobs with more interpersonal dynamics

-work setting that is personal, focusing on relationships between people and meeting personal needs of others

-jobs such as counselor, librarian, teacher, nurse, and the clergy

Judging-Perceiving (J-P)

J - jobs that require sticking to established procedures and schedules in an orderly, prescribed manner

-work setting that is structured and organized with plans in place and where decisions get made

-jobs such as accountant, administrator, manager

P - jobs that allow spontaneity, open-endedness, and flexibility

-work setting that is spontaneous, flexible and open to change and where gathering information is important

-jobs such as counselor, editor, journalist, researcher, entrepreneur, strategic planner, and futurist

As an example of how individual preferences influence career choice, a well-suited career for an ENTP would be one that involves working closely with other people (E);

uses imagination, dreaming, and speculation (N); offers rewards for objective decision making and clarity of thought (T); and provides opportunity for responding to constantly emerging situations (P). Examples of well-matched careers for ENTP types are writing which allows for developing individual ideas rather than following others' prescribed plans; computer programming which fulfills their need for developing and creating as well as their love for technology; and marketing and public relations which use E people skills and N creativity as well as the flexibility to meet deadlines and ever-changing situations (P) (Kroeger & Thuesen, 1988).

According to Macdaid (1986), N is the preference most expected in counseling samples since this is the function that enables counselors to see patterns, meanings, and relationships of ideas and behavior (p. 2). This preference for N is contrasted to the approximately 75 percent of the general population which reports a preference for S (Myers & McCaulley, 1985). In work settings where considerable paperwork is required, counselors may show more S's than work settings where the counseling is the major effort.

While Grant and Foy (1972) found that the distribution of personality types among student personnel administrators did not differ significantly from the general population, a

sample of student personnel administrators from 22 colleges and universities collected during February, 1983, (N=51) showed a preference for E, N, F, and J, with ESFJ, ENFP, and ISTJ being the most frequent types (Macdaid, 1986). In a sample of 341 administrators in colleges and technical institutes (Macdaid, 1986) the respondents showed a preference for E, N, T, and J , with ENTJ, ISTJ, ESTJ, and INTJ being the most frequent types. The two groups were similar in their preferences except for the T and F with the student personnel administrators showing a preference for F. The frequency of individual types was not similar except for the ISTJ type. Data on counselors showed a preference for E, N , F, and J, with ENFP, INFP, and ENFJ being the most frequent types. This group was similar to the student personnel administrators in preferences.

Samples of university teachers (N=2282) showed a preference for I, N, T, and J with ISTJ, INTJ, ENTJ, and ENFP being the most frequent types (Macdaid, 1986). This is similar to a group of computer professionals (N=1229) where the most frequent preferences were for I, N, T and J with ISTJ, INTJ, INTP, and ESTJ being the most frequent types. A small sample of public relations workers and publicity writers (N=89) showed a preference for E, N, F, and J with ENFP, ESTJ, and ENTP being the most frequent types.

Combinations of Perception and Judgment. In addition to looking at the characteristics of each of the individual sixteen types, it is also becoming common to look at preferences in various combinations (Myers & McCaulley, 1985). Kiersey & Bates' (1978) theory in Please Understand Me holds that each of the sixteen types falls into one of four temperaments: NT (ENTJ, INTJ, ENTP, INTP); NF (ENJF, INFJ, ENFP, INFP); SP (ESFP, ISFP, ESTP, ISTP); and SJ (ESTJ, ISTJ, ESFJ, ISFJ) with each temperament possessing certain strengths.

An example of this would be to compare the NF and SJ temperaments. The NF has a great capacity for working with people and drawing out their best; is articulate and persuasive; has a strong desire to help others and the ability to affirm others freely and easily. NF's make positive, affirming idealists whom others may like but who often have difficulty being firm supervisors and tend to give workers too much leeway (Kroeger & Thuesen, 1988).

This is contrasted to the SJ's administration, dependability, and ability to take charge. SJ's make phenomenal administrators of systems that require precision and organization. They have a tendency to do what needs to be done today, often to the neglect of what needs to be done tomorrow (Kroeger & Thuesen, 1988).

Another common method of looking at type is through the various combinations of perception (S-N) with judgment (T-F) which results in four groups:

ST (ISTJ, ISTP, ESTJ, ESTP)

SF (ISFJ, ISFP, ESFJ, ESFP)

NT (INTJ, INTP, ENTJ, ENTP)

NF (INFJ, INFP, ENFJ, ENFP)

Isabel Myers considered this grouping to be the most important of the groupings of types, particularly when career choices are concerned (Myers & McCaulley, 1985). Some of the comparisons between these groups appear in Table 1.

Table 1

Combinations of Perception and Judgment

People who prefer	ST Sensing & thinking	SF Sensing & feeling	NF Intuition & feeling	NT Intuition & thinking
Focus attention on	Facts	Facts	Possibilities	Possibilities
And handle these with	Impersonal analysis	Personal warmth	Personal warmth	Impersonal analysis
Thus they tend to become	Practical & matter-of-fact	Sympathetic & friendly	Enthusiastic & matter of fact	Logical & ingenious
And find scope for	Technical skills with facts & objects	Practical help & services for people	Understanding & communication with people	Theoretical & technical developments

According to type theory, (Myers & McCaulley, 1985) the best chances for success and satisfaction in a career lie in the following fields:

ST - Fields that demand impersonal analysis of concrete facts such as economics, law, surgery, business, accounting, production, and the handling of machines and materials

SF - Fields that involve the selling of tangibles, service-with-a-smile jobs, teaching (especially in the early grades and applied fields), nursing, pediatrics and other health fields involving direct patient care

NF - Fields that involve the unfolding of possibilities, especially possibilities for people, such as teaching (particularly in the upper grades and college), counseling, selling intangibles, writing and research

NT - Fields that involve solving problems within their field of special interest, which may likely be scientific research, mathematics, intricate aspects of finance, or any sort of development or pioneering in technical or administrative areas

Summary

Because the services offered by CPE offices have expanded (CPC, 1988), the professionals involved in the delivery of these services are required to perform a variety of work tasks or functions such as counseling,

marketing and research. Preferences for careers, work settings and work tasks are expressions of the personality and personal development of individuals (Ginzberg, et al, 1951; Super, 1957; Holland, 1966). Based on Jung's theory of psychological types, the MBTI is a tool for self understanding. Preferences as indicated by the MBTI reflect differences in attitude, orientation, decision-making and the relative importance of these functions in a person's life. Because of an inborn predisposition for type, individuals find the activities related to that predisposition more interesting and rewarding. People tend to choose careers which should attract their type as shown by the evidence of specific MBTI types clustered within specific occupations (Myers & McCaulley, 1985). It is likely that within a particular career, specific MBTI types will indicate a preference for some functions of the profession (professional orientation) over others.

CHAPTER THREE

METHODOLOGY

To establish a sound background for the study a review of the literature related to the MBTI and career development was conducted. A questionnaire was designed to obtain the demographic data and professional orientation of career planning and employment professionals. The questionnaire, along with Form G of the MBTI, were mailed to the subjects. Data from the two questionnaires were analyzed using Appalachian State University's Office of Academic Computing Services.

Subjects

The population of the study included members of the Southern College Placement Association (SCPA) who represent four-year public institutions in the ten states comprising the association (Alabama, Florida, Georgia, Louisiana, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Virginia). The subjects in the study population included professionals holding the positions of director, associate or assistant director; coordinator of career planning; interim or acting director; coordinator of career planning and placement; career planning/placement assistant; coordinator of satellite office on campus;

coordinator of placement; assistant vice president for counseling resources; assistant to the director; and cooperative education coordinator.

Responses were received from 125 of the 171 individuals in the sample. Six of the responses could not be used, resulting in 119 useable responses (70 percent).

Instruments

Two questionnaires were used. The first, the Career Planning and Employment Questionnaire, was designed for this study and includes demographic data and professional orientation data (Appendix A). The second is Form G of the Myers-Briggs Type Indicator (Appendix B).

Career Planning and Employment Questionnaire

The Career Planning and Employment (CPE) Questionnaire was designed to gather demographic and professional orientation data from the subjects. The demographic data section of the instrument includes position, length of time in current position, length of time in CPE profession, age, educational level, and sex. The professional orientation section asked the subjects to indicate how much they like or dislike performing 30 specific job functions. The job functions were based on author's experience in the CPE profession and on a study conducted by the College Placement Council (1988) in which member institutions were

surveyed regarding services offered through career planning and employment offices.

The purpose of the professional orientation section of the instrument was to determine CPE professionals' preferences for performing some functions over others. The 30 functions were grouped into six categories with five functions in each category. The six categories were: Administration, Counseling, Marketing, Teaching, Research and Technology (Table 2). The likes and dislikes of CPE professionals toward these six categories define their professional orientation.

A pilot test of the instrument was conducted on a group of five CPE professionals who were not members of the study population. All five professionals were directors of their respective CPE programs. Responses and suggestions were used to improve the clarity of items and instructions in the questionnaire. In addition a factor analysis was performed on the items in the professional orientation section of the instrument. Results of the factor analysis are provided in Chapter 4.

Myers-Briggs Type Indicator

The MBTI is a self-report inventory which was developed by Isabel Myers and Katharine Briggs to implement Jung's theory of psychological types (Myers & McCaulley, 1985). The MBTI is published in three forms: Form F (166 items),

Table 2

Professional Orientation

Administration
staff supervision/evaluation
budgeting
placement of graduates/alumni
credential service
part-time/summer employment

Counseling
career development
academic advising
testing
career guidance programs
internship/experiential program

Marketing
generating recruiters
promotion of services
job development
liaison to business/industry/government/education
developing faculty rapport/support

Teaching
teaching life/career planning course
teaching academic courses
conducting resume/job search workshops
presenting programs at professional meetings
conducting workshops for classes/clubs, etc.

Research
professional research
followup on students/employers
evaluation of services
publishing articles
utilizing current career/job market information

Technology
using video/vcr equipment
computerization of administrative tasks
using interactive satellite programs
computerized career guidance programs
computerized signup for interviews

Form G (126 items), and Form AV, the Abbreviated Version. Form G, published since 1977, is now the standard form of the MBTI (Myers & McCaulley, 1985). All necessary instructions for administration of the MBTI are printed on the cover of the question booklet and on the response sheet. Form G of the MBTI is divided into three parts. Parts I and III consist of paired phrase questions and Part II consists of pairs of words from which the respondent must choose the one that appeals more to him/her.

The MBTI uses four scales or indices for determining an individual`s preferences: Extraversion/Introversion (E/I); (Sensing/Intuition (S/N); Thinking/Feeling (T/F); and Judging/Perceiving (J/P). Sixteen possible personality types are generated by the combination of these preferences.

The instrument can be scored by hand or by computer. Scoring consists of the weighted total for each pole of the four indices. "The score for each index consists of a letter preference and a number showing the reported strength of the preference" (Myers & McCaulley, 1985, p. 9). The letter for each index is determined by comparing the points for each pole. The pole with the greater number of points indicates the direction of the preference (example: E 15 and I 8 yield E). The smaller number of points is subtracted from the larger number of points and

the difference in points is converted to the preference score by use of a conversion table (Myers & McCaulley, 1985).

Reliability. In terms of internal consistency and replicability over time, reliability studies yield split-half reliability coefficients (Pearson r's) commonly exceeding .80 (Myers & McCaulley, 1985). The internal consistency of
type-category scores can be expected to fall somewhere between estimates derived from phi coefficients and estimates derived from tetrachoric coefficients with estimated reliabilities of type categories appearing to be satisfactory in most cases (Carlyn, 1977).

"For purposes of computing correlations and for regression analyses of the MBTI, a continuous score may be computed...that converts type and preference score into a single value. But more commonly, preference scores on the MBTI are expressed as types in terms of the closest pole on a given scale" (Carlson, 1985, p. 357).

In test-retest data for MBTI type-category scores for four samples involving college students and one involving elementary school teachers, the proportion of agreement was significantly higher than would be expected by chance (Carlyn, 1977). In a report by Carlson (1985) in which studies of the reliability of the MBTI from 1975-1983 were reviewed, the studies showed satisfactory internal

consistency of each of the four scales, and with the possible exception of the T-F scale, satisfactory stability of scores across several months. Test-retest reliabilities of the MBTI show consistency over time and when subjects do report a change in type, it is most likely to occur in only one preference and in scales where the original preference was low (Myers & McCaulley, 1985).

The internal consistency reliabilities estimated by coefficient alpha are roughly the same as those computed with Pearson r's (Myers & McCaulley, 1985). Basically the estimates of internal consistency reliabilities for the continuous scores of the MBTI scales are acceptable for most adult samples. The reliabilities are lower, but still adequate for younger samples and for other populations where individuals are considered to be performing at lower levels of achievement or type development (Myers & McCaulley, 1985).

Validity. The MBTI is intended to measure the theoretical construct of Jung's typology. Three types of validity are examined: content validity, predictive validity and construct validity. Carlyn (1977, p. 469) states that "...a wealth of circumstantial evidence has been gathered and results appear to be quite consistent with Jungian theory." The relationships between the MBTI and other tests have generally supported hypotheses concerning underlying theoretical overlap. Five of the

eight studies reviewed in the intertest correlations section concentrated on the E-I scale of the instrument. However, three more recent studies have found evidence of validity of some of the remaining scales (Carlson, 1985). The MBTI has successfully predicted behaviors as far ranging as couples' problems to story imagery and group conformity (Carlson, 1985). Based on the manual (Myers & McCaulley, 1985), construct validity is demonstrated in the numerous type distributions presented throughout the manual.

Extensive item analyses were conducted for Form A through Form G of the MBTI to ensure that items discriminated between the poles of a preference and made a useful contribution to only one of the four indices (Myers & McCaulley, 1985). The prediction ratio formula was used to indicate the social desirability of each item response. Prediction ratios were based only on individuals in the sample who responded to the item and the relationship of that particular item to all of the items for that preference. "In order for a response to a question to appear on the scoring keys, the prediction ratio must be above .62 for a weight of 1, or .72 for a weight of 2, and the item popularity for the opposite preference must be below .50..." (Myers & McCaulley, 1985, p. 147).

Research Design

The responses to the CPE questionnaire and the MBTI were compared to determine if a consistent profile existed among subjects in terms of position, length of time in current position, length of time in CPE profession, age, educational level, sex, professional orientation, and personality type as measured by the MBTI. The study also investigated whether there were significant differences between personality type as measured by the MBTI and each of the demographic variables, and whether there were significant differences between personality type as measured by the MBTI and the professional orientation of the subjects.

The subjects were selected from the membership of the Southern College Placement Association. All individual members employed by public four-year institutions were included in the study. The two survey instruments, along with a letter explaining the study and giving instructions for completion and return of the instruments, (Appendix C), were sent to the subjects in late June, 1989. Return, postage-paid envelopes were provided for the subjects to return the instrument to the researcher by mid July, 1989. A follow-up letter was sent to those subjects who had not responded in late July (Appendix D). Subjects were given the opportunity to request a description of their MBTI personality type and those descriptions were sent in late August.

Data Analysis

Frequencies of Myers-Briggs Type were presented using the standard MBTI type table (Appendix E). The chi-square statistic was used to test for significant differences among the individuals of each MBTI type regarding the demographic data and professional orientation as measured by the self-designed questionnaire.

The Office of Academic Computing Services at Appalachian State University (ASU) in Boone, NC scored the MBTI using the VAX/VMS computer and the university's standard scoring program for the MBTI. A computer program was designed to perform the statistical analyses.

Results of the analyses as they apply to Research Questions 1, 2, and 3 are presented in Chapter 4.

CHAPTER FOUR

PRESENTATION OF DATA AND ANALYSIS OF FINDINGS

Three research questions were explored in this study. Each research question is presented separately along with a presentation of the findings and a statement as to whether the data support or fail to support the research question.

Responses and the 16 Myers-Briggs Types

The CPE questionnaire and MBTI were sent to 171 career planning and employment professionals in public four-year institutions who were members of the Southern College Placement Association. A total of 125 responses were received, resulting in 119 useable responses (70 percent of the total).

Research Question 1: Does a consistent profile exist among members of the career planning and employment profession in terms of position, length of time in current position, length of time in CPE profession, age, educational level, sex, professional orientation and personality type as measured by the Myers-Briggs Type Indicator?

A computer program utilizing SPSS-X was written to process the responses to the CPE questionnaire with frequency distributions computed for each question.

Position. Of the 119 useable responses the majority (84) were from the position of Director. There were six associate directors, 14 assistant directors, five career counselors, and ten were in "other" positions. The "other" positions included coordinator of career planning, interim or acting director, coordinator of career planning and placement, career planning/placement assistant, coordinator of satellite office on campus, coordinator of placement (two), assistant vice president for counseling resources, assistant to the director, and cooperative education coordinator. Table 3 contains summary data of the positions of the respondents.

Table 3

Positions of CPE Professionals

Position	Number	Percentage
Director	84	71
Associate Director	6	5
Assistant Director	14	12
Career Counselor	5	4
JLD Coordinator	0	0
Other	10	8

Length of Time in Current Position & in CPE Profession. The largest number of respondents (54) had been in their current positions from one to five years. A very small percentage of respondents (3%) had been in the CPE profession less than one year followed by 18 percent for 11-15 years. Most respondents had been in the CPE profession either one to five years (29%) or 16 years or more (28%). (See Table 4).

Table 4

Length of Time in Current Position and in CPE Profession

Length of Time	Position		Profession	
	No.	%	No.	%
less than 1 year	16	13	3	3
1-5 years	54	45	35	29
6-10 years	18	15	27	23
11-15 years	12	10	21	18
16 or more	19	16	33	28

Age. The respondents were typically between the ages of 30-59 (89%), with seven percent between the ages of 20-29 and four percent age 60 and over. See Table 5.

Table 5

Age of Respondents

Age	No.	%
20-29 years	8	7
30-39 years	40	34
40-49 years	33	28
50-59 years	33	28
60 year and over	5	4

Educational Level. The majority of respondents held master's degrees as their highest level of educational achievement (66%), followed by 18 percent with an earned doctorate. Table 6 shows summary information on educational level.

Table 6

Educational Level of Respondents

Degree	No.	%
Baccalaureate	13	11
Master's	78	66
Specialist	5	4
Earned Doctorate	21	18
Post Doctoral	2	2

Sex. There were slightly more females than males in the sample (53% and 47% respectively) as indicated in Table 7.

Table 7

Sex of Respondents

	No.	%
Females	63	53
Males	56	47

Professional Orientation. The 30 responses on the CPE questionnaire were divided into six categories which represent six professional orientations. The professional orientations and the questions for each one are listed below:

Administration (Questions 1, 5, 12, 13 and 18)

Counseling (Questions 2, 8, 10, 17 and 23)

Marketing (Questions 4, 14, 20, 25 and 26)

Teaching (Questions 7, 15, 24, 29 and 30)

Research (Questions 3, 9, 11, 21 and 27)

Technology (Questions 6, 16, 19, 22 and 28).

A factor analysis was performed on the responses to the 30 questions of the CPE questionnaire which constitute the professional orientation section. Results from the factor analysis are reported under Research Question 3. The

analysis of the responses to the 30 questions in the CPE questionnaire and the six professional orientations did not indicate significant variability. Respondents generally liked more than disliked the various aspects of their jobs as indicated by the mean scores in Table 8. The possible response range for each question was from one, for dislike very much, to five, for like very much. The means ranged from a low of 3.45 for Technology to a high of 4.21 for Marketing. The distribution of responses for each orientation was normal with the exception of marketing and teaching which were skewed to the left. The overall distribution for the 30 questions was normal.

Table 8

Descriptive Statistics for Six Professional Orientations

	Mean	Median	Min-Max	Std Dev
Admin.	3.48	3.60	2.40-5.00	.55
Counseling	3.53	3.60	1.60-4.80	.60
Marketing	4.21	4.40	2.40-5.00	.64
Teaching	4.03	4.20	2.00-5.00	.68
Research	3.62	3.60	2.00-5.00	.65
Technology	3.45	3.40	1.60-5.00	.70

Myers-Briggs Type. Appalachian State University's Myers-Briggs standard test-scoring program was used to score the MBTI instruments. The program was modified to show the ID number rather than the name of each individual. The scores were saved in an SPSS-X system data file.

All sixteen Myers-Briggs types were represented in the sample although not in equal numbers (Table 9). The type with the highest frequency was ESTJ with 18 individuals and the types with the lowest frequency were ISTP, ISFP, and ESTP with two each. Following the ESTJ type were ENTJ with 14, and ISTJ and ENTP with 13 each. The remainder included: nine ESFJ; eight ENFP; seven INTP; six each INFJ, INTJ and INFP; five each ISFJ and ENFJ; and three ESFP. See Table 9.

Summary

The survey findings indicated that the majority of CPE professionals were directors. Most had been in their current positions from one to five years; the length of time in the profession was more likely to be from one to five years or 16 years or more. No clear preference for a particular professional orientation was indicated although the subjects did seem to generally like more than dislike their work. Subjects were most likely to hold a master's degree as their highest level of educational achievement

Table 9
MBTI Type for CPE Professionals

ISTJ	ISFJ	INFJ	INTJ
N 13 11 %	N 5 4 %	N 6 5 %	N 6 5 %
Female 4	Female 1	Female 3	Female 4
Male 9	Male 4	Male 3	Male 2
ISTP	**ISFP**	**INFP**	**INTP**
N 2 2 %	N 2 2 %	N 6 5 %	N 7 6 %
Female 1	Female 2	Female 4	Female 2
Male 1	Male 0	Male 2	Male 5
ESTP	**ESFP**	**ENFP**	**ENTP**
N 2 2 %	N 3 3 %	N 8 7 %	N 13 11 %
Female 2	Female 2	Female 7	Female 11
Male 0	Male 1	Male 1	Male 2
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N 18 15 %	N 9 8 %	N 5 4 %	N 14 12 %
Female 4	Female 5	Female 3	Female 9
Male 14	Male 4	Male 2	Male 5

and were slightly more likely to be female than male. In terms of Myers-Briggs type, they were most likely to be an ESTJ, ENTJ, ISTJ, or ENTP.

Research Question 2: Are there statistically significant differences for CPE professionals between demographic profile (position, length of time in current position, length of time in CPE profession, age, educational level, and sex) and personality type?

A computer program utilizing SPSS-X was written to merge the two SPSS-X system data files containing the demographic data and the Myers Briggs type data. Cross tabulations between Myers-Briggs type and the demographic data were performed.

The chi-square test of independence was performed to determine if there were significant differences between each of the variables in the demographic data and Myers-Briggs type. The chi-square test was not valid for Myers-Briggs type and any of the variables in the demographic data because for each cross tabulation there were a large number of cells with extremely low expected frequencies. The suggested rule through simulation studies is that no more than 20 percent of the cells have expected frequencies of less than five (Conover, 1971). The percentage of cells with expected frequencies of less than five ranged from a low of 75 percent for sex to a high of 99 percent for both years in the CPE profession and age.

Highlights of the demographic data for each MBTI type are presented below. Tables 10 and 11 give detailed information for each type.

ESTJ. The 18 ESTJ's made up the largest percentage of the sample (15%). The majority (83%) of the ESTJ's were Directors with half of them age 40-49. None were 60 years old or older and only one was in the 20-29 age group. Fourteen (78%) individuals of this type were male and 13 (77%) held Master's degrees.

ENTJ. The 14 (12%) ENTJ respondents made up the second largest group. The majority (64%) of this type were female. The majority (79%) were directors and half of them had been in their positions from one to five years. All but two of the 14 were between the ages of 30-59. One of the two individuals who had completed post-doctoral work was of this type.

ISTJ. There were 13 ISTJ's (11%). Eleven (85%) were directors and over half (54%) had been in the CPE profession 16 years or more. None of the respondents was in the 20-29 age group and only one was in the 40-49 age group. Most were 50-59 (46%) or 30-39 (31%). The majority (69%) were males.

ENTP. There were also 13 ENTP's (11%). Again, the majority were directors (62%). The majority of this group were females (85%) who had been in their current positions from one to five years (54%). The 30-39 age group had the

Table 10
Demographic Variables and 16 MBTI Types

	TOTAL	ESTJ	ENTJ	ISTJ	ENTP	ESFJ	ENFP	INTP	INTJ	INFP	INFJ	ISFJ	ENFJ	ESFP	ISTP	ISFP	ESTP
POSITION																	
Director	84	15	11	11	8	7	6	6	5	2	3	3	5	--	--	1	1
Assoc/Asst Dir.	20	2	--	2	3	--	1	--	1	3	3	1	--	2	1	--	1
Career Counselor	5	1	2	--	1	--	--	--	--	--	--	1	--	--	--	--	--
JLD	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other	10		1	--	1	2	1	1	--	1	--	--	--	1	1	1	--
YEARS IN POSITION																	
<1	16	1	2	1	4	--	1	--	--	1	--	--	1	1	1	1	2
1 - 5	54	6	7	4	7	4	4	5	3	2	5	2	3	1	--	1	--
6 - 10	18	5	1	1	2	--	1	2	3	2	--	--	--	--	1	--	--
11 - 15	12	3	2	2	--	2	1	--	--	--	--	1	--	1	--	--	--
16>	19	3	2	5	--	3	1	--	--	1	1	2	1	--	--	--	--
YEARS IN CPE																	
<1	3	--	--	1	--	--	--	--	--	--	--	--	--	--	1	1	--
1 - 5	35	3	5	2	4	2	4	2	2	2	3	--	1	2	--	1	2
6 - 10	27	3	2	2	6	2	1	2	3	2	1	1	1	--	1	--	--
11 - 15	21	4	2	1	2	2	1	3	1	1	1	1	2	--	--	--	--
16>	33	8	5	7	1	3	2	--	--	1	1	3	1	1	--	--	--
AGE																	
20 - 29	8	1	1	--	1	1	--	--	--	1	--	--	1	--	1	--	1
30 - 39	40	3	4	4	6	3	2	3	3	2	3	1	1	1	1	2	1
40 - 49	33	9	3	1	3	1	3	3	2	1	2	2	2	1	--	--	--
50 - 59	33	5	5	6	3	3	3	1	1	2	1	1	1	1	--	--	--
60+	5	--	1	2	--	1	--	--	--	--	--	1	--	--	--	--	--
SEX																	
F	63	4	9	4	11	5	7	1	4	4	3	1	3	2	1	2	2
M	56	14	5	9	2	4	1	6	2	2	3	4	2	1	1	--	--
EDUCATION																	
Bachelors	13	--	2	4	3	--	2	--	--	--	--	--	--	1	1	--	--
Masters	78	13	7	6	7	9	5	4	4	3	6	4	4	1	1	2	2
Spec	5	1	2	0	--	--	--	--	--	2	--	--	--	--	--	--	--
Doct	21	4	2	3	2	--	1	3	2	1	--	1	1	1	--	--	--
Post Doct	2	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--

Table 11
16 Types and Demographic Variables
as Percentage of Each Type

	TOTAL	ESTJ	ENTJ	ISTJ	ENTP	ESFJ	ENFP	INTP	INTJ	INFP	INFJ	ISFJ	ENFJ	ESFP	ISTP	ISFP	ESTP
POSITION																	
Director	71	83	79	85	62	78	75	86	83	33	50	60	100	---	---	50	50
Assoc/Asst Dir.	17	11	---	15	23	---	13	---	17	50	50	20	---	67	50	---	50
Career Counselor	4	6	14	---	8	---	---	---	---	---	---	20	---	---	---	---	---
JLD	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Other	8	---	7	---	8	22	13	14	---	17	---	---	---	33	50	50	---
YEARS IN POSITION																	
<1	13	6	14	8	31	---	13	---	---	17	---	---	20	33	50	50	100
1 - 5	45	33	51	31	54	44	50	71	50	33	83	40	60	33	---	50	---
6 - 10	15	28	7	8	15	---	13	29	50	33	---	---	---	---	50	---	---
11 - 15	10	17	14	15	---	22	13	---	---	---	---	20	---	33	---	---	---
16>	16	17	14	38	---	33	13	---	---	17	17	40	20	---	---	---	---
YRS IN CPE																	
<1	3	---	---	8	---	---	---	---	---	---	---	---	---	---	50	50	---
1 - 5	29	17	36	15	31	22	50	29	33	33	50	---	20	67	---	50	100
6 - 10	23	17	14	15	46	22	13	29	50	33	19	20	20	---	50	---	---
11 - 15	18	22	14	8	15	22	13	43	17	17	17	20	40	---	---	---	---
16>	28	44	36	54	8	33	25	---	---	17	17	60	20	33	---	---	---
AGE																	
20 - 29	7	6	7	---	8	11	---	---	---	17	---	---	20	---	50	---	50
30 - 39	34	17	29	31	46	33	25	43	50	33	50	20	20	33	50	100	50
40 - 49	28	50	21	8	23	11	38	43	33	17	33	40	40	33	---	---	---
50 - 59	28	28	36	46	23	33	38	13	17	33	17	20	20	33	---	---	---
60+	4	---	7	15	---	11	---	---	---	---	---	20	---	---	---	---	---
SEX																	
Female	53	22	64	31	85	56	88	14	67	67	50	20	60	67	50	100	100
Male	47	78	36	69	15	44	13	86	33	33	50	80	40	33	50	---	---
EDUCATION																	
Bachelors	11	---	14	31	23	---	25	---	---	---	---	---	---	33	50	---	---
Masters	66	72	50	46	54	100	63	57	67	50	100	80	80	33	50	100	100
Spec	4	6	14	---	---	---	---	---	---	33	---	---	---	---	---	---	---
Doct	18	22	14	23	16	---	13	43	33	17	---	20	20	33	---	---	---
Post Doct	2	---	7	---	8	---	---	---	---	---	---	---	---	---	---	---	---

highest number of respondents (6) and there were no respondents in the 60 and over age group. The majority (54%) had a Master's degree and one of the two respondents who had completed post-doctoral work was in this group.

ESFJ. Nine (8%) of the respondents were ESFJ. The majority (78%) were directors and the other two were in "other" positions. None of the respondents had been in their positions less than one year or from six to ten years. There were five females and four males and all of the respondents held a Master's degree.

ENFP. Of the eight (7%) respondents in this group, three-fourths were directors. Half of them had been in their positions from one to five years and in the profession from one to five years. There were none in the 20-29 age group or in the 60 and over age group. Most of the ENFP's (75%) were between the ages of 40-59. Seven (88%) were female.

INTP. Seven INTP's made up six percent of the sample. Six (86%) of these were directors. The majority (5) had been in their positions from one to five years with the remaining two having been in their positions for six to ten years. Six (86%) of these were between the ages of 30-49. The group was predominantly male (86%) and either had a Master's (57%) or a Doctorate (43%) degree.

INTJ. Of the six (5%) individuals in this group, five (83%) were directors and four (67%) were females. Half of

the individuals in this group had been in their positions from one to five years and the other half from six to ten years. Fifty percent of the individuals in this group had also been in the profession from six to ten years. Three individuals (50%) were between the ages of 30-39. Two-thirds of the group had a Master's degree and one-third had a Doctorate.

INFP. The six INFP's (5%) were not predominantly directors. Half of them were assistant or associate directors and one was in one of the "other" positions. The majority (4) had been in their current positions and in the profession from one to ten years. They were predominantly female (66%) and two of the five individuals who held Specialist degrees were in this group.

INFJ. There were six (5%) individuals in this group. Half were directors and the other half were assistant or associate directors. All but one individual had been in their current positions from one to five years and half of them had been in the CPE profession from one to five years. Half were age 30-39. The group was evenly divided between male and female and all of them had a Master's degree.

ISFJ. The five (4%) ISFJ's were predominantly male (80%), directors (60%) with Master's degrees (80%). Three (80%) of the individuals had been in their current positions 11 years or more and three (80%) had been in the CPE profession 16 years or more.

ENFJ. All (4%) ENFJ's were directors. Three of them were female and two were male. The majority (80%) had Master's degrees and the majority (60%) had been in their current positions from one to five years.

ESFP. Of the three ESFP's (3%), none were directors, two were assistant or associate directors and one was listed as "other". One had been in his/her current position 11-15 years, one had been in less than one year and one from one to five years. Two had been in the profession from one to five years and one had been in the profession 16 years or more. There was one each in the 30-39, 40-49 and 50-59 age group; there were two females and one male; and there was one each with a Bachelor's, Master's and Doctorate degree.

ISTP. Of the two ISTP's (2%) one was an assistant or associate director and one was listed as "other". One had been in his/her current position less than one year and in the profession less than one year, and one had been in his/her current position six to ten years and in profession six to ten years. One was in the 20-29 age group and one in the 30-39 age group. One was female and one was male and one had a Bachelor's degree and one had a Master's degree.

ISFP. There were two ISFP's (2%). One was a director and one was listed as "other". Both had been in their positions and in the CPE profession either less than one

year or from one to five years. Both were age 30-39, female, with Master's degrees.

ESTP. The two individuals (2%) in this group were a director and an assistant or associate director. Both were female and had been in their positions less than one year and in the CPE profession from one to five years and had Master's degrees. One was 20-29 and the other was 30-39.

Summary

There were no significant differences among CPE professionals regarding their Myers-Briggs type and any of the variables in the demographic data.

While the majority of the respondents were directors, this was not true for the following types: INFP, INFJ, ESFP, ISTP, and ESTP.

Most respondents had been in their current position from one to five years (45%) and this was true for half of the types.

The most frequent responses for length of time in the profession were one to five years and 16 years or more. With the exception of ENTP, INTP, INTJ, ENFJ, ESFP, and ISTP, all types had one of these as the most frequent response for length of time in the profession.

Most respondents were between the ages of 30-59 with the highest number being in the 30-39 age group. This pattern was fairly consistent for most of the types.

The majority of respondents held Master's degrees (66%) with 21 holding earned Doctorate degrees and two having completed post doctorate work. This was fairly consistent throughout with the two post-doctoral types being ENTJ and ENTP.

There were slightly more females (53%) than males (47%). This was consistent with the exception of ESTJ, ISTJ, INTP, and ISFJ which had more males than females.

Research Question 3: Are there statistically significant differences between CPE professionals' personality type and professional orientation?

A factor analysis was performed on the 30 questions of the CPE Questionnaire which represented the six professional orientations. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy, an index for comparing the magnitude of the observed correlation coefficients to the magnitude of the partial correlation coefficients, was .69. Since below 0.5 is unacceptable (Norusis, 1988), this number is adequate for the factor analysis.

The Bartlett Test of Sphericity was used to determine whether the correlation matrix was an identity matrix. The test statistic for sphericity was large and the associated significance level was very low, PR <.000005, indicating that the 30 questions are not independent of each other.

An SPSS-X computer program was written to perform a factor analysis on responses to the 30 questions with no limitations on the number of factors. Nine factors were extracted which explained 68 percent of the variance. All nine factors had eigenvalues greater than 1.0.

The first six of these factors accounted for 57 percent of the variance.

Correlations among the nine factors and the 30 professional orientation variables ranged from a low of .52 for Question 21 to a high of .83 for Question 9. The nine factors and the questions that were included in those factors after a varimax rotation are listed in Table 12.

Table 12
Factor Loadings for Professional Orientation

Nine Factors	Q#	Factor Loadings	Six Factors	Q#	Factor Loadings	Original Six Factors	Q#
1	4	.83	1	4	.82	*Marketing	* 4
	25	.78		25	.79		*25
	14	.70		26	.71		*26
	26	.70		14	.66		*14
	13	.59		13	.58	Admin.	
	20	.54		20	.53		*20
	21	.45		21	.45	Research	
	11	.42					
2	15	.75	2	15	.77	*Teaching	*15
	7	.69		30	.71		*30
	24	.69		29	.68		*29
	30	.63		24	.59		*24
	29	.53		7	.58		
3	9	.89	3	6	.82	*Technology	* 6
	27	.79		16	.77		*16
	22	.45		28	.64		*28
4	6	.83	4	9	.82	*Research	*9
	16	.73		27	.76		*27
	28	.67		22	.46	Technology	
				1	-.34	Admin.	
5	2	.80	5	12	.67	*Admin	*12
	23	.68		10	.59	Counseling	
	17	.59		11	.54	Research	
				3	.51	Research	
				19	.44	Technology	
				5	.44		* 5
6	10	.74	6	2	.77	*Counseling	* 2
	12	.72		23	.67		*23
				17	.67		*17
				8	.37		* 8
7	18	.80					
	8	.48					
8	1	.67					
	3	.57					
	19	.49					
9	5	.78					

The strongest comparisons were between the Marketing and Teaching orientations, each of which contained all five questions for that particular orientation. The weakest comparisons were with the Administration orientation which was scattered between factors 6 and 9 and the Research orientation which contained only two questions. The other two orientations, Technology and Counseling, contained three questions each. A breakdown of each orientation follows.

Factor 1 contained all five questions from the Marketing orientation. This factor also included Question 13 from the Administrative orientation and Questions 21 and 11 which were from the Research orientation.

Factor 2 contained five questions and they corresponded exactly to the five questions in the Teaching orientation.

Of the three questions included in Factor 3, two of those were from the Research orientation.

Factor 4 contained three questions, all three of which were from the Technology orientation.

Factor 5 contained three questions also, all three of which were from the Counseling orientation.

Questions from the Administration orientation were scattered between Factors 6 through 9 with one question being listed in Factor 1.

A factor analysis of the 30 questions with a maximum of six factors was also performed (Table 12). The correlations between the six factors and the 30 professional orientation variables ranged from a low of .35 for Question 1 to a high of .75 for Question 9.

With the exception of the Research and Administration, orientations, which contained only two questions each, the orientations had three or more questions. The Marketing and Teaching orientations had all five questions listed. A breakdown of each orientation follows.

Again the factor analysis listed all five questions from the Marketing orientation in Factor 1 with two additional questions, 13 and 21 which were in the Administration and Research orientations respectively.

Factor 2 corresponded exactly to the Teaching orientation.

Factor 3 contained four questions, three of which were part of the Technology orientation. Question 18, which was also included in this factor, was from the Administration orientation.

Factor 4 contained four questions, two of which were from the Research orientation. The other two, questions 22 and 1, were listed in the Technology and Administration orientations respectively.

Factor 5 contained two questions from the Administration orientation. The other four questions in

this factor, 10, 11, 3, and 19 were from the Counseling (Q 10), Research (Q 11 and 3), and Technology (Q 19) orientations.

The four questions in Factor 6 were all from the Counseling orientation.

The factor loadings after rotation for the analyses with nine factors and six factors are listed in Table 12 along with the questions for the six orientations as originally designed.

Using Chronbach's Alpha, the reliability for each dimension as originally designed, was determined. Results showed internal consistency of each dimension with reliability coefficients ranging from .46 for Administration to .81 for Marketing. See Table 13.

Table 13

Reliability Coefficient of Factor Analysis

Orientation	Chronbach's Alpha
Marketing	.81
Teaching	.73
Technology	.70
Research	.65
Counseling	.62
Administration	.46

Based on the above factor analyses, the six professional orientations as originally designed were used in this study because the orientations were reliable and the factors generally fell into the categories as originally designed.

Myers-Briggs Type and Professional Orientation

The chi-square test of independence was performed to determine significant differences between Myers-Briggs type and six professional orientations. The chi-square test was not valid because of the large number of cells in each table which contained expected frequencies of less than five.

The majority of the 119 individuals had mean scores of 3.0 and 4.0 for Administration (111), Counseling (111), Research (100) and Technology (101). For Marketing and Teaching, the most frequent mean scores were 4.0 and 5.0 (101 and 93 respectively). A summary of the 16 Myers Briggs types and each professional orientation follows. Tables 14 - 19 contain specific data.

ESTJ. The 18 ESTJ had slightly higher mean scores for Administration and three of the five individuals who had a mean score of 5.0 for Administration were ESTJ. The means of individuals of this type were very close to the overall mean scores for Counseling, Teaching, and Research. One of the five who had a mean score of 2.0 for Counseling was this type as was one of the three who had a mean score of

5.0 for Counseling. One of the five with a mean score of 2.0 for Research was also an ESTJ. Individuals of this type had mean scores for Marketing and Technology that were slightly higher than the overall mean scores for these orientations. One of the eight with a mean score of 2.0 for Technology was an ESTJ.

ENTJ. Individuals of this type had slightly higher mean scores for Administration, Counseling, Marketing and Research than the overall mean scores for these four orientations. One of the five with a mean score of 2.0 for Research was an ENTJ. Their mean scores were very close to the overall mean scores for Teaching and Technology. One of the four individuals with a mean score of 2.0 for Teaching was this type as was one of the eight individuals with a mean score of 2.0 for Technology.

ISTJ. Individuals of this type had slightly higher mean scores for Administration than the overall mean scores for this orientation. One of the three individuals with a mean score of 2.0 for Administration was an ISTJ as was one of the five individuals with a mean score of 5.0 for Administration. The mean scores for this type were very close to the overall mean scores for Counseling, Marketing, Research and Technology. One of the eight individuals with mean score of 2.0 for Technology was an ISTJ. Their mean scores for Teaching were slightly lower than the overall mean scores for this orientation.

ENTP. The Administration and Marketing orientations had slightly higher mean scores by individuals of this type. Their mean scores were very close to the overall mean scores for Counseling, Teaching, Research and Technology. One of the eight individuals with a mean score of 2.0 for Technology was an ENTP as was one of the five individuals with a mean score of 2.0 for Counseling.

ESFJ. Individuals of this type were very close to the overall mean scores for Administration, Counseling, Marketing, and Research. One of the five individuals with a mean score of 5.0 for Administration was ESFJ as was one of the five individuals with a mean score of 2.0 for Counseling. One of the five individuals with mean scores of 2.0 for Research was an ESFJ. Individuals of this type had slightly higher mean scores for Teaching and Technology.

ENFP. Individuals of this type had mean scores that were very close to the overall mean scores for Administration and Counseling. Their scores were divided for the Teaching orientation. While their mean scores were slightly higher for Marketing and Technology, they were slightly lower for Research.

INTP. The Administration orientation had lower mean scores by individuals of this type. Their mean scores were very close to the overall mean scores for Counseling

two individuals with a mean score of 2.0 for Marketing was an INTP as was one of the four individuals with a mean score of 2.0 for Teaching and one of the five individuals with a mean score of 2.0 for Research.

INTJ. The mean scores for individuals of this type were very close to the overall mean scores for Administration, Counseling, Marketing, and Technology. They had higher mean scores for Teaching and three of the six INTJ had mean scores of 5.0 for Teaching. Their mean scores were evenly divided on Research.

INFP. Individuals of this type were very close to the overall pattern with their mean scores for Counseling, Marketing, and Teaching. Their mean scores for Research were a little lower than the overall mean scores. With the Technology orientation, four of the six individuals had mean scores of 3.0 which was the most frequent mean score for this orientation, but the other two individuals had mean scores of 5.0.

INFJ. Mean scores for Administration, Marketing, Teaching, and Research were slightly lower for this type than the overall mean scores for these orientations. One of the three individuals with a mean score of 2.0 for Administration was an INFJ. Their mean scores were close to the overall mean scores for Counseling and Technology. One of the three individuals with a mean score of 5.0 for Counseling was an INFJ as was one of the eight individuals with a mean score of 2.0 for Technology.

ISFJ. Individuals of this type were close to the overall mean scores for Administration, Marketing, Teaching, and Technology. One of the five individuals with a mean score of 2.0 for Counseling was an ISFJ as was one of the eight individuals with a mean score of 2.0 for Technology. Their mean scores for Counseling and Research were slightly lower than the overall mean scores.

ENFJ. Mean scores for individuals of this type were close to the overall mean scores for Administration and Counseling. One of the three individuals who had a mean score of 5.0 for Counseling
was this type. Their mean scores for Marketing and Teaching were slightly higher than the overall mean scores while their mean scores for Research and Technology were slightly lower. One of the eight individuals with a mean score of 2.0 for Technology was an ENFJ as was one of the five individuals with a mean score of 2.0 for Research.

ESFP. Individuals of this type were close to the overall mean scores for Administration, Marketing, and Research. Their mean scores for Counseling and Teaching were slightly lower and one of the five individuals with a mean score of 2.0 for Counseling was an ESFP. Their mean scores for Technology were slightly higher than the overall mean scores for this orientation.

ISTP. Their mean scores were very similar to the overall mean scores for Administration, Marketing, and

Teaching and were slightly lower than the overall mean scores for Research and Technology. One of the eight individuals with a mean score of 2.0 for Technology was an ISTP.

ISFP. The mean scores for individuals of this type were very similar to the overall mean scores for Administration, Counseling, Marketing, and Technology while their mean scores for Teaching and Research were slightly lower than the overall. Two of the four individuals with a mean score of 2.0 for Teaching were of this type.

ESTP. The mean scores for individuals of this type were very similar to the overall mean scores for Counseling, Teaching, and Research. Their mean scores for Administration and Marketing were slightly lower than overall while their mean scores for Technology were slightly higher. One of the three individuals with a mean score of 2.0 for Administration was this type as was one of the two individuals with a mean score of 2.0 for Marketing.

Summary

There were no significant differences among CPE professionals regarding Myers-Briggs Type and Professional Orientation.

The respondents generally liked more than disliked each of the professional orientations as indicated by mean

scores typically in the 3.0 to 5.0 range. The two orientations that respondents liked the most were Marketing and Teaching and the orientation that respondents liked least was Technology.

The ESTJ, ENTJ, ISTJ, and ENTP types liked Administration slightly more than the other 12 types while the ENTP and INFJ types liked it slightly less.

The ENTJ types liked Counseling slightly more while the ISFJ and ESFP types liked it slightly less.

Marketing was favored by the ESTJ, ENTJ, ENTP, ENFP, and ENFJ types while the INFJ types liked it slightly less.

The ESFJ, INTJ, and ENFJ types liked Teaching slightly more than the other 13 types while the ISTJ, INFJ, and ESFP types liked it slightly less.

Research was favored by the ENTJ types but five of the types liked it slightly less (ENFP, INFP, ISFJ, ENFJ, and ISTP).

Technology was liked more by the ESTJ, ESFJ, ENFP, and ESFP types and less by the ENFJ and ISTP types.

Responses and the Eight Preferences

Since no significant differences were found using the 16 Myers Briggs Types, the Research Questions were explored using the eight preferences (E-I, S-N, T-F, and J-P) and using the four combinations of perception and judgment (ST, SF, NT, and NF).

Table 14
Mean Scores and Administration

Sixteen Types

		ESTJ	ENTJ	ISTJ	ENTP	ESFJ	ENFP	INTP	INTJ	INFP	INFJ	ISFJ	ENFJ	ESFP	ISTP	ISFP	ESTP
Totals	119	18	14	13	13	9	8	7	6	6	6	5	5	3	2	2	2
Mean Scores																	
2.0	3	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	1
3.0	56	6	5	2	6	5	4	6	3	4	5	3	3	1	2	--	1
4.0	55	9	9	9	7	3	4	1	3	2	--	2	2	2	--	2	--
5.0	5	3	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--

Eight Preferences

		E	I		S	N		T	F		J	P	
Totals		72	47		54	65		75	44		76	43	
Mean Scores													
2.0		1	2		2	1		2	1		2	1	
3.0		31	25		20	36		31	25		32	24	
4.0		36	19		27	28		38	17		37	18	
5.0		4	1		5	--		4	1		5	--	

Four Combinations of Perception & Judgment

	ST	SF	NT	NF
Totals	35	19	40	25
Mean Scores				
2.0	2	--	--	1
3.0	11	9	20	16
4.0	18	9	20	8
5.0	4	1	--	--

Table 15
Mean Scores and Counseling

Sixteen Types

		ESTJ	ENTJ	ISTJ	ENTP	ESFJ	ENFP	INTP	INTJ	INFP	INFJ	ISFJ	ENFJ	ESFP	ISTP	ISFP	ESTP
Totals	119	18	14	13	13	9	8	7	6	6	6	5	5	3	2	2	2
Mean Scores																	
2.0	5	1	--	--	1	1	--	--	--	--	--	1	--	1	--	--	--
3.0	51	8	8	7	5	3	4	2	1	2	2	4	1	1	1	1	1
4.0	60	8	6	6	7	5	4	5	5	4	3	--	3	1	1	1	1
5.0	3	1	--	--	--	--	--	--	--	--	1	--	1	--	--	--	--

Eight Preferences

		E	I		S	N		T	F		J	P	
Totals		72	47		54	65		75	44		76	43	
Mean Scores													
2.0		4	1		4	1		2	3		3	2	
3.0		31	20		26	25		33	18		34	17	
4.0		35	25		23	37		39	21		36	24	
5.0		2	1		1	2		1	2		3	--	

Four Combinations of Perception & Judgment

	ST	SF	NT	NF
Totals	35	19	40	25
Mean Scores				
2.0	1	3	1	--
3.0	17	9	16	9
4.0	16	7	23	14
5.0	1	--	--	2

Table 16
Mean Scores and Marketing

Sixteen Types

		ESTJ	ENTJ	ISTJ	ENTP	ESFJ	ENFP	INTP	INTJ	INFP	INFJ	ISFJ	ENFJ	ESFP	ISTP	ISFP	ESTP
Totals	119	18	14	13	13	9	8	7	6	6	6	5	5	3	2	2	2
Mean Scores																	
2.0	2	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1
3.0	16	1	5	1	2	--	--	1	--	--	3	1	1	--	--	--	1
4.0	54	8	5	8	3	5	3	3	5	4	3	2	1	1	1	2	--
5.0	47	9	4	4	8	4	5	2	1	2	--	2	3	2	1	--	--

Eight Preferences

		E	I		S	N		T	F		J	P	
Totals		72	47		54	65		75	44		76	43	
Mean Scores													
2.0		1	1		1	1		2	--		--	2	
3.0		10	6		4	12		11	5		12	4	
4.0		26	28		27	27		33	21		37	17	
5.0		35	12		22	25		29	18		27	20	

Four Combinations of Perception & Judgment

	ST	SF	NT	NF
Totals	35	19	40	25
Mean Scores				
2.0	1	--	1	--
3.0	3	1	8	4
4.0	17	10	16	11
5.0	14	8	15	10

Table 17
Mean Scores and Teaching

Sixteen Types

		ESTJ	ENTJ	ISTJ	ENTP	ESFJ	ENFP	INTP	INTJ	INFP	INFJ	ISFJ	ENFJ	ESFP	ISTP	ISFP	ESTP
Totals	119	18	14	13	13	9	8	7	6	6	6	5	5	3	2	2	2
Mean Scores																	
2.0	4	--	1	--	--	--	--	1	--	--	--	--	--	--	--	2	--
3.0	22	3	--	5	1	3	3	--	2	--	2	1	--	2	--	--	--
4.0	58	9	9	5	10	4	2	4	1	4	3	3	2	--	1	--	1
5.0	35	6	4	3	2	2	3	2	3	2	1	1	3	1	1	--	1

Eight Preferences

		E	I		S	N		T	F		J	P	
Totals		72	47		54	65		75	44		76	43	
Mean Scores													
2.0		1	3		2	2		2	2		1	3	
3.0		12	10		14	8		11	11		16	6	
4.0		37	21		23	35		40	18		36	22	
5.0		22	13		15	20		22	13		23	12	

Four Combinations of Perception & Judgment

	ST	SF	NT	NF
Totals	35	19	40	25
Mean Scores				
2.0	--	2	2	--
3.0	8	6	3	5
4.0	16	7	24	11
5.0	11	4	11	9

Table 18
Mean Scores and Research

Sixteen Types

		ESTJ	ENTJ	ISTJ	ENTP	ESFJ	ENFP	INTP	INTJ	INFP	INFJ	ISFJ	ENFJ	ESFP	ISTP	ISFP	ESTP
Totals	119	18	14	13	13	9	8	7	6	6	6	5	5	3	2	2	2
Mean Scores																	
2.0	5	1	1	--	--	1	--	1	--	--	--	--	1	--	--	--	--
3.0	48	4	7	5	4	3	4	2	2	2	4	3	2	--	2	2	2
4.0	52	10	4	8	8	4	3	3	2	3	1	2	1	3	--	--	--
5.0	14	3	2	--	1	1	1	1	2	1	1	--	1	--	--	--	--

Eight Preferences

		E	I		S	N		T	F		J	P	
Totals		72	47		54	65		75	44		76	43	
Mean Scores													
2.0		4	1		2	3		3	2		4	1	
3.0		26	22		21	27		28	20		30	18	
4.0		33	19		27	25		35	17		32	20	
5.0		9	5		4	10		9	5		10	4	

Four Combinations of Perception & Judgment

	ST	SF	NT	NF
Totals	35	19	40	25
Mean Scores				
2.0	1	1	2	1
3.0	13	8	15	12
4.0	18	9	17	8
5.0	3	1	6	4

Table 19
Mean Scores and Technology

Sixteen Types

		ESTJ	ENTJ	ISTJ	ENTP	ESFJ	ENFP	INTP	INTJ	INFP	INFJ	ISFJ	ENFJ	ESFP	ISTP	ISFP	ESTP
Totals	119	18	14	13	13	9	8	7	6	6	6	5	5	3	2	2	2
Mean Scores																	
2.0	8	1	1	1	1	--	--	--	--	--	1	1	1	--	1	--	--
3.0	59	7	9	8	6	3	3	4	3	4	3	2	3	1	1	1	1
4.0	42	8	3	2	5	6	5	3	3	--	2	2	--	2	--	1	--
5.0	10	2	1	2	1	--	--	--	--	2	--	--	1	--	--	--	1

Eight Preferences

		E	I		S	N		T	F		J	P	
Totals		72	47		54	65		75	44		76	43	
Mean Scores													
2.0		4	4		4	4		5	3		6	2	
3.0		33	26		24	35		39	20		38	21	
4.0		29	13		21	21		24	18		26	16	
5.0		6	4		5	5		7	3		6	4	

Four Combinations of Perception & Judgment

	ST	SF	NT	NF
Totals	35	19	40	25
Mean Scores				
2.0	3	1	2	2
3.0	17	7	22	13
4.0	10	11	14	7
5.0	5	--	2	3

Research Question 1: Does a consistent profile exist among members of the career planning and employment profession in terms of position, length of time in current position, length of time in CPE profession, age, educational level, sex, professional orientation and personality type as measured by the Myers-Briggs Type Indicator?

A computer program utilizing SPSS-X was written to process the responses to the CPE questionnaire with frequency distributions computed for each of the eight preferences and each of the four combinations of perception and judgment.

Of the 119 responses, there were more E (72) than I (47), slightly more N (65) than S (54), more T (75) than F (44) and more J (76) than P (43).

In terms of the four combinations of perception and judgment, the two combinations with the most frequencies were NT (45) and ST (35). There were 25 NF and 19 SF.

Summary

The respondents were more likely to be Extraverted, Intuitive, Thinking, and Judging and were more likely to be either NT or ST.

Research Question 2: Are there statistically significant differences for CPE professionals between their demographic profile (position, length of time in current position, length of time in CPE profession, age, educational level, and sex) and personality type?

A computer program utilizing SPSS-X was written to perform cross tabulations between the demographic data and the eight preferences and between the demographic data and each of the four combinations of perception and judgment. The chi square test of independence was performed to determine significant differences between each of the variables in the demographic data and each of the eight preferences of the MBTI, and to determine significant differences between each of the variables in the demographic data and each of the four MBTI combinations of perception and judgment.

The chi-square test was valid for three variables: sex, years in current position, and years in the CPE profession and half of the eight preferences. Sex and the S-N variables was significant at <.005 level; sex and the J-P variables was significant at <.001 level; years in current position and the J-P variables were significant at <.005 level and years in current position and the S-N variables were significant at <.05 level; years in the CPE profession and the S-N variables were significant at <.01 level and years in CPE profession and the J-P variables were significant at <.05 level.

The chi-square test was not valid for three of the eight variables and the demographic data because there were too many cells with expected frequencies of less than five (Conover, 1971). The variables were position, age, and

educational level. Table 20 contains information on validity of chi-square test.

Table 20

Significance Levels of Demographic Data and E-I, S-N, T-F, & J-P

	E-I	S-N	T-F	J-P
Current Position	---	---	---	---
Time in Current Position	---	.05	---	.005
Time in Profession	---	.01	---	.05
Sex	---	.005	---	.001
Educational Level	---	---	---	---
Age	---	---	---	---

A description of the eight preferences and each of the demographic variables follows. Table 21 contains detailed information.

E-I. There were more E than I in the entire sample and in every position except the assistant/associate director position which had slightly more I (11) than E (9). There

were over twice as many E females (43) as I females (20) and the males were almost evenly divided with 29 E and 27 I. There were more E than I in years in current position except for six to ten years which was evenly distributed with nine each for E and I. There were also more E than I in years in CPE except the three who had been in the profession less than one year were all I. The only age group with more I than E was the 60 plus group which had two E and three I. There were more E than I at every educational level.

S-N. There were slightly more N (65) than S (54) in the sample. There were more N than S in every position except "other" which was even with five each. There were more female N (42) than S (21) but for males there were more S (33) than N (23). Those who had been in their current position 11-15 years and 16 years or more were more S than N (9 and 13 S and 3 and 6 N respectively). Those who had been in the profession the least amount of time and the longest amount of time were more S than N. The three individuals who had been in the profession less than one year were all S, and of the 33 individuals who had been in the profession more than 16 years, twice as many were S (22) as N (11). There were more N at every age except the 20-29 group which had four each and the 60 plus group which had four S and one N. There were more N than S at every educational level.

Table 21
Demographic Variables and Eight Preferences and Four Combinations of Perception and Judgment

	TOTAL	E	I	TOTAL	S	N	TOTAL	T	F	TOTAL	J	P	TOTAL	ST	SF	NT	NF
POSITION	119	72	47		54	65		75	44		76	43		35	19	40	25
Director	84	53	31		38	46		57	27		60	24		27	11	30	16
Assoc/Asst Dir.	20	9	11		9	11		10	10		9	11		6	3	4	7
Career Counselor	5	4	1		2	3		4	1		4	1		1	1	3	--
JLD	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other	10	6	4		5	5		4	6		3	7		1	4	3	2
SEX																	
Female	63	43	20		21	42		36	27		33	30		11	10	25	17
Male	56	29	27		33	23		39	17		43	13		24	9	15	8
YRS CURRENT POS																	
<1	16	12	4		7	9		11	5		5	11		5	2	6	3
1 - 5	54	32	22		18	36		32	22		34	20		10	8	22	14
6 - 10	18	9	9		7	11		15	3		10	8		7	--	8	3
11 - 15	12	9	3		9	3		7	5		10	2		5	4	2	1
16>	19	10	9		13	6		10	9		17	2		8	5	2	4
YRS IN CPE																	
<1	3	0	3		3	--		2	1		1	2		2	1	--	--
1 - 5	35	23	12		12	23		20	15		18	17		7	5	13	10
6 - 10	27	15	12		9	18		19	8		15	12		6	3	13	5
11 - 15	21	13	8		8	13		13	8		14	7		5	3	8	5
16>	33	21	12		22	11		21	12		28	5		15	7	6	5
AGE																	
20 - 29	8	6	2		4	4		5	3		4	4		3	1	2	2
30 - 39	40	21	19		16	24		25	15		22	18		9	7	16	8
40 - 49	33	22	11		14	19		21	12		22	11		10	4	11	8
50 - 59	33	21	12		16	17		21	12		23	10		11	5	10	7
60+	5	2	3		4	1		3	2		5	--		2	2	1	--
EDUCATION																	
Bachelors	13	8	5		6	7		10	3		6	7		5	1	5	2
Masters	78	48	30		38	40		44	34		53	25		22	16	22	18
Spec	5	3	2		1	4		3	2		3	2		1	--	2	2
Doct	21	11	10		9	12		16	5		13	8		7	2	9	3
Post Doct	2	2	--		--	2		2	--		1	1		--	--	2	--

T-F. The sample had more T (75) than F (44). This was true in every position except "other" which had more F (6) than T (4). There were more T females and over twice as many T males. There were more T than F in every category of years in current position (except 16 years or more which was even), years in CPE profession, age, and educational level.

J-P. The sample had more J (76) than P (43). In every position except "other", there were more J than P. There were slightly more J females and over three times as many J males. There were more J than P in every category of years in current position except there were more P (11) than J (5) of those who had been in their position less than one year. Of the three individuals in the profession less than one year, two were P and one was J, but there were more J than P in the other categories of years in the profession. Every age group had more J than P except the 20-29 age group which had four each. There were slightly more P (7) than J (6) of those with Bachelors degrees. Individuals at every other educational level were more J than P except the two who had completed post-doctorate work were one J and one P.

Summary. There were significant differences among CPE professionals in terms of sex and the S-N variables and the J-P variables, years in current position and the S-N and J-P variables, years in CPE profession and the S-N

variables and the J-P variables. There were no significant differences among CPE professionals with any of the other demographic variables and the eight preferences.

Those individuals in the positions of director, career counselor, and "other" were more likely to be Extraverted, as was most of the sample, while the assistant/associate directors were more likely to be Introverted. Those in "other" positions were most different from the sample and were more likely to be Sensing than Intuitive, Feeling than Thinking, and Perceiving than Judging.

Females were twice as likely to be Extraverted and Intuitive, more likely to be Thinking, and slightly more likely to be Judging. Males were almost equally likely to be Extraverted or Introverted, but more likely to be Sensing, over twice as likely to be Thinking, and over three times as likely to be Judging.

No matter how long the individuals had been in their current positions, they were equally or more likely to be Extraverted and Thinking. Only those who had been in their positions the longest (11-16 years or more) were more likely to be Sensing. Only those who were newest to their positions (less than one year) were more likely to be Perceiving than Judging.

Those who were very new to the profession were more likely to be Introverted and Perceiving while the others were more likely to be Extraverted and Judging. Those who

had been in the profession the least amount of time and the longest amount of time were more Sensing than Intuitive. No matter how long they had been in the profession they were more likely to be Thinking than Feeling.

The oldest group (60 plus) was more Introverted. The youngest group (20-29) was evenly divided between Sensing and Intuitive while the 60 plus group was more Sensing than Intuitive. There were more Thinking than Feeling at every age level and more Judging than Perceiving at every age level except 20-29 which was tied between J and P.

There were more Extraverts, Intuitives and Thinking at every educational level. Those with bachelors degrees were slightly more likely to be Perceiving than Judging and those with post-doctoral study were equally as likely to be Judging as Perceiving. All others were more likely to be Judging.

Demographic Data and Four Combinations of Perception and Judgment. There were more NT (40) and ST (35) than NF (25) and SF (19). A description of each of the four combinations and the demographic data follows. Table 10 contains detailed information.

NT. There were more NT (40) than any of the other three combinations. More directors (30) and career counselors (3) were NT. Females were most frequently (25) NT and this was the second most frequent combination of

who had been in their position less than one year (6), from one to five years (22) and from six to ten years (18). NT was also most frequent among those who had been in the CPE profession from one to five years, six to ten years and 11-15 years, and among those ages 30-49. This combination was tied with the ST combination at five each for most individuals with bachelors degrees. There was also a tie betwen NT and ST for most individuals with master's degrees (22 each). NT and NF were tied at two each of those with specialist degrees. This combination was most frequent among those with doctorate degrees (9) and the two individuals who had done post-doctoral study were NT.

ST. This was the second most frequent combination (35). It was also the second most frequent combination for assistant/
associate directors (6). Most males were ST (24). It was the most frequent combination among those who had been in their
position 11-15 years (5) and 16 years or more (8) and also among those who had been in the profession less than one year (2) and 16 years or more (15). ST was most frequent among the 20-29 age group (3) and 50-59 age group (11) and it was tied with SF as the most frequent among the 60 plus age group at two each. ST was tied with NT at five each among those with a bachelors degree and it was also tied with NT at 22 each among those holding a masters degree.

ST was the second most frequent combination among those with a doctorate degree (17).

NF. Those in the assistant/associate director positions were more frequently NF (7) although none of the career counselors were NF. This was the second most frequent among females (17). None in the 60 plus age group were NF. NF was tied with NT at two each for those with specialist degrees.

SF. This was the combination with the fewest individuals (19). Those in "other" positions were most frequently SF (4). It was the second most frequent combination among those who had been in their positions 11-15 years and 16 years or more and it was also the second most frequent combination among those in the CPE profession less than one year. SF was tied with ST for the most individuals in the 60 plus age group at two each.

Summary.

There were no significant differences among CPE professionals in terms of the four combinations of perception and judgment and the demographic variables. Of the four combinations of perception and judgment (ST, SF, NT, and NF), CPE professionals were more likely to be NT or ST.

Directors and career counselors were more likely to be NT while assistant/associate directors were more likely to be NF, followed by ST. Those in "other" positions were

more likely to be SF. Career counselors were more likely to be NT and there were no NF career counselors.

Females were more likely to be NT followed by NF while males were more likely to be ST followed by NT.

Those who were very new to their positions and those who had been in their positions up to ten years were more likely to be NT. Those who had been in their positions the longest were more likely to be ST.

Except for those who had been in the profession less than one year or 16 years or more, who were more likely to be ST, all of those in the profession were more likely to be NT.

Those with bachelors degrees and masters degrees were as likely to be NT as ST. Those with specialist degrees were more likely to be NT or NF. Those with doctorate degrees were more likely to be NT followed by ST while the two who had completed post doctorate work were NT.

Research Question 3: Are there statistically significant differences between CPE professionals' personality type and professional orientation?

The chi square test of independence was performed to determine significant differences between each of the eight preferences of the MBTI (E-I, S-N, T-F, and J-P) and the six professional orientations and between each of the four MBTI combinations of perception and judgment (ST, SF, NT, and NF) and the six professional orientations.

The test was not valid for the eight preferences and the six professional orientations because the expected frequency was too low for a large percentage of the cells.

The test was not valid for the four combinations of perception and judgment and the six professional orientations because the expected frequency was too low for a large percentage of the cells.

A summary of the differences between the eight preferences and each professional orientation follows. Tables 14 - 19 contain further information.

E-I. E more frequently had mean scores of 4.0 for Administration while I more frequently had mean scores of 3.0. Of the five individuals who had a mean score of 5.0 for Administration, four were E. Both E and I had more frequent mean scores of 4.0 for Counseling. Four of the five individuals who had a mean score of 2.0 for Counseling were E. E had more
frequent mean scores of 5.0 for Marketing while I had more frequent mean scores of 4.0. Both E and I had more frequent mean scores of 4.0 followed by 5.0 for Teaching. E had more frequent mean scores of 4.0 for Research while I had slightly more frequent mean scores of 3.0. Both E and I had more frequent mean scores of 3.0 for Technology.

S-N. S had more frequent mean scores of 4.0 for Administration while N had more frequent mean scores of 3.0. The five individuals who had a mean score of 5.0 for

Administration were S. For Counseling S had slightly more frequent mean scores of 3.0 while N had more frequent mean scores of 4.0. Four of the five individuals who had a mean score of 2.0 for Counseling were S. Both S and N had slightly more frequent mean scores of 4.0 over 5.0 for Marketing and for Teaching. S had more frequent mean scores of 4.0 for Research while N had slightly more frequent mean scores of 3.0. Both S and N had more frequent mean scores of 3.0 for Technology.

T-F. T had more frequent mean scores of 4.0 while F had more frequent mean scores of 3.0 for Administration. Four of the five individuals who had mean scores of 5.0 for Administration were T. Both T and F had more frequent mean scores of 4.0 for Counseling. Both T and F had more frequent mean scores of 4.0 followed by 5.0 for Marketing and Teaching. T had more frequent mean scores of 4.0 for Research while F had more frequent mean scores of 3.0. Both T and F had more frequent mean scores of 3.0 for Technology. Seven of the ten individuals who had mean scores of 5.0 for Technology were T.

J-P. J had more frequent mean scores of 4.0 for Administration while P had more frequent mean scores of 3.0. The five individuals who had a mean score of 5.0 for Administration were J. Both J and P had more frequent mean

scores of 4.0 for Counseling. J had more responses with a mean score of 4.0 while P had more responses with a mean score of 5.0 for Marketing. Both J and P had mean scores of 4.0 followed by 5.0 for Teaching. Both J and P had slightly more mean scores of 4.0 for Research followed closely by mean scores of 3.0. Both J and P had more frequent mean scores of 3.0 for Technology.

Summary.

The E, N, T, and J liked Administration more than the I, S, F and P. For Counseling, both E and I, T and F, and J and P liked it equally while N liked it more than the S. The E liked Marketing more than the I as did the T more than the F and the P more than the J. The S and N were similar in their preference for Marketing. For Teaching the E and I were similar in their preference, as were the S and N, T and F, and J and P. The E, S, and T preferred Research more than the I, N, and F, while the J and P were similar in their preference. Both E and I, S and N, and J and P were neutral on Technology while the T liked it slightly more than the F.

Summary information for the four combinations of perception and judgment and each of the professional orientations follows. Detailed information can be found in Tables 14 - 19.

NT. The 40 NT were evenly divided for Administration. Twenty had mean scores of 3.0 and 20 had mean scores of

4.0. Twenty-three individuals had mean scores of 4.0 for Counseling followed by 16 with mean scores of 3.0. The most frequent mean score for Marketing was 4.0 (16) followed by 5.0 (15). Over half (24) of the 40 NT had 4.0 as the most frequent mean score for Teaching followed by 5.0 (11). For Research, mean scores of 4.0 (17) were slightly ahead of mean scores of 3.0 (15) as the most frequent. NT had 3.0 as the most frequent mean score for Technology.

ST. ST had the most frequent mean score of 4.0 for Administration followed by 3.0. Four of the five individuals with mean scores of 5.0 for Administration were ST. The mean scores for Counseling were almost evenly divided between 3.0 (17) and 4.0 (16). The most frequent mean score for Marketing and Teaching was 4.0 followed by 5.0. For Research, the most frequent mean score was 4.0 followed by 3.0. The most frequent mean score for Technology was 3.0.

NF. The most frequent mean score was 3.0 for Administration and 4.0 for Counseling. Two of the three individuals who had mean scores of 5.0 for Counseling were NF. The most frequent mean score for Marketing and Teaching was 4.0 followed closely by 5.0. The most frequent mean score for Research was 3.0 followed by 4.0. NF had 3.0 as the most frequent mean score for Technology.

SF. For Administration SF had nine each with a mean score of 3.0 and 4.0. One SF had a mean score of 5.0 for Administration. Slightly more SF had mean scores of 3.0 (9) than 4.0 (7) for Counseling. Three of the five individuals who had mean scores of 2.0 for Counseling were SF. The most frequent mean score for Marketing was 4.0 (10) followed by 5.0 (8). The most frequent mean score for Teaching was 4.0 (7) followed closely by 3.0 (6). Research had 4.0 as the most frequent mean score followed very closely by 3.0. The most frequent mean score for Technology was 4.0.

Summary. The NT, ST, and SF generally liked Administration more while the NF was neutral. Counseling was preferred by the NT and NF, liked slightly by the ST, and the SF were slightly neutral. All four combinations liked Marketing and Teaching. The NT, ST, and SF liked Research while the NF were more neutral. All combinations except SF, who liked it, were neutral on Technology.

Chapter Five

DISCUSSION

Summary

College career planning and employment offices have evolved from placement bureaus to complex, computerized offices offering a variety of services. The career planning and employment functions formerly were performed by interested faculty members. Today, CPE offices are managed by full-time professionals who are usually trained in counseling, education, or business.

The problem addressed by this study was to determine whether a consistent profile existed among CPE professionals in higher education in terms of demographic data (position, length of time in current position, length of time in CPE profession, age, educational level, and sex), professional orientation, and personality type as measured by the Myers-Briggs Type Indicator. Further, the problem was to examine whether there were significant differences between CPE professionals' demographic profile and personality type and to determine whether there were significant differences between CPE professionals' professional orientation and personality type.

Career choice and preferences for particular work settings and work tasks were viewed as reflections of an

individual's personality and as developmental processes. Specifically, the Myers-Briggs Type Indicator (MBTI), which is based on Carl Jung's theory of psychological types, was examined in light of its relationship to career choice.

The specific research questions addressed in this study were:

Research Question 1: Does a consistent profile exist among members of the CPE profession in terms of position, length of time in current position, length of time in CPE profession, age, educational level, and sex (demographic profile), professional orientation, and personality type as measured by the Myers-Briggs Type Indicator?

Research Question 2: Are there statistically significant differences between CPE professionals' demographic profile and personality type?

Research Question 3: Are there statistically significant differences between CPE professionals' professional orientation and personality type?

Procedures

Members of the Southern College Placement Association who represented four-year, public institutions were surveyed. Two instruments were used. A self-designed CPE Questionnaire was used to obtain the demographic data and the professional orientation preferences, and Form G of the MBTI was used to obtain personality type.

Frequencies of Myers-Briggs types were presented using the standard MBTI type table. The chi-square statistic was used to test for significant differences among the individuals for each of the 16 Myers-Briggs types regarding the demographic data and professional orientation.

The chi-square statistic was also used to test for significant differences among the individuals for each of the eight preferences of the MBTI (E-I, S-N, T-F, and J-P) and for each of the four MBTI combinations of perception and judgment (ST, SF, NT, and NF) regarding the demographic data and professional orientation.

Findings, Discussion, and Conclusions

Research Question 1

Findings

The survey findings indicated that the majority of respondents were directors (71%). Respondents were most likely to have been in their current positions from less than one year to five years (59%) and most likely to have been in the profession from one to five years (29%) or 16 years or more (28%). No clear preference for a particular professional orientation was indicated, although the respondents did seem to generally like more than dislike their work. Respondents liked Marketing and Teaching most and Technology least. Respondents were most likely to hold a master's degree as their highest level of educational

achievement (66%) followed by a doctorate degree at 18 percent, and were slightly more likely to be female (53%) than male (47%). In terms of Myers-Briggs type, the most frequent types were ESTJ, ENTJ, ISTJ, and ENTP. Of the eight preferences (E-I, S-N, T-F, and J-P) there were more E, N, T, and J in the sample. Of the four combinations of perception and judgment (ST, SF, NT, and NF) respondents were most likely to be NT followed by ST.

Discussion

The majority of the respondents were directors so there were not many respondents from the other positions. There were no respondents in this sample in the position of JLD Coordinator (Job Location and Development Coordinator) which is a position that typically handles part-time employment for students, however, one of those in "other" positions was a cooperative education coordinator. Since 1971 the greatest increase in services of CPE offices has been in the cooperative education, internship and experiential education program offerings (CPC, 1988). The lack of respondents in the JLD Coordinator position may indicate that respondents did not identify with the particular job title used in the questionnaire. It is also possible that individuals in various other positions are performing these tasks but do not have job titles specifically indicating experiential education.

The highest level of educational achievement for respondents was a master's degree and a doctorate degree at 66 percent and 18 percent respectively. A survey of student personnel professionals by Grant and Foy (1972) found that most of the respondents held master's degrees (54%) followed by doctorate degrees (38%). In a survey by CPC (1988), 86 percent of CPE directors had at least a master's degree and 15 percent had a doctorate degree. It seems that CPE professionals, when compared to student personnel professionals in general, have fewer earned doctorate degrees but when compared to their own profession a few years ago, may be earning slightly more doctorate degrees.

The results of this study indicated that slightly more than 50 percent of the CPE professionals had been in the profession ten years or less. This was close to the findings of CPC (1988) which found that slightly more than 50 percent of CPE professionals had been in the profession eight years or less. There were more females than males in the sample.

The finding that the majority of respondents (59%) had been in their current position from less than one year to five years, combined with the finding that the majority (89%) were between the ages of 30-59, seems to indicate a fair amount of turnover, advancement, or lateral moves in the profession, or that individuals are coming into the profession at a later age.

Respondents generally seemed to like more than dislike their jobs as indicated by the mean scores for the six professional orientations. Marketing and Teaching were liked most by respondents while Technology was liked least. Even though computer technology is used by 90 percent of CPE offices (CPC, 1988), it seems that CPE professionals are not particularly enamoured with the technology.

Although all 16 Myers Briggs types were represented in the sample, there were more ESTJ, ENTJ, ISTJ, and ENTP types. The types with the least representation were ISTP, ISFP, and ESTP. The presence of all 16 types and the overrepresentation of certain types is typical of most occupations (Myers and McCaulley, 1985). Of the eight preferences (E-I, S-N, T-F, and J-P) there were more E, N, T, and J in the sample. These findings were consistent with norms for the general population except there are more S than N in the general population. The fact that the sample was highly educated may account for the finding that there were more N than S because there are more N than S at higher levels of education (Macdaid, 1986). Females did not fit norms for the general population with their preference for T over F. The findings do not support Macdaid's (1986) finding that there are more I than E at higher levels of education.

Conclusions

A fairly consistent profile existed among CPE professionals in this sample in terms of the demographic profile (position, length of time in current position, length of time in profession, age, educational level, and sex), preferred professional orientation and MBTI personality type. With the majority of respondents being in the position of director, it is difficult to make conclusions about the assistant/associate directors, career counselors, and those in "other" positions.

As a group, CPE professionals stay in a particular position a relatively short period of time (from less than one year to five years) and seem to be advancing or making lateral moves within the profession after several years in a particular position.

Within the sample it appears that the CPE profession may be becoming a female-dominated profession. There were more females than males among the respondents and the majority of respondents were directors of their programs. It is likely that women are not only the majority in the profession but are also moving into upper management positions within the profession.

Although a highly educated group, most CPE professionals were reaching the position of director without an earned doctorate degree. However, more CPE professionals were earning doctorate degrees when this

sample was compared to a study completed a few years ago (CPC, 1988).

In terms of Myers-Briggs type, the CPE profession was typical of other careers in that all 16 types were represented although not equally. CPE professionals were more alike than different in terms of personality type, with assistant/associate directors and those in "other" positions most likely to be different from the sample. CPE professionals were most likely to prefer E, N, T, and J with ESTJ, ENTJ, ISTJ and ENTP being the most common types. Of the four combinations of perception and judgment, they indicated a preference for NT or ST. As a group they were typical of the general population in their preference for E, T, and J, and
typical of a highly educated population in their preference for N. The frequency of TJ types indicates that the profession is attracting more administrative types rather than NF counseling types.

CPE professionals were generally happy with their work and displayed a stronger preference for Marketing and Teaching over the other orientations. Since these orientations deal with activities outside the office, this may reflect a trend toward consumerism and the need for higher education institutions to focus on enrollment and a marketing orientation.

Research Question 2

Findings

The chi-square test was not valid for the 16 Myers-Briggs types and any of the variables in the demographic data because of the large number of cells which contained expected frequencies of less than five.

There were no significant differences among CPE professionals regarding their Myers-Briggs type and any of the variables in the demographic data.

The chi-square test was not valid for the E-I or T-F variables and any of the variables in the demographic data because of the large number of cells which contained expected frequencies of less than five.

There were no significant differences among CPE professionals regarding the E-I or T-F variables and any of the variables in the demographic data.

The chi-square test was valid for for the S-N variables and sex, years in current position, and years in CPE profession.

The chi-square test was valid for the J-P variables and sex, years in current position, and years in CPE profession.

There were significant differences among CPE professionals regarding the S-N and J-P variables and sex, years in current position, and years in CPE profession.

Table 22 indicates levels of significance for the demographic variables.

Table 22

Validity of Chi-Square Test for Eight Preferences and Demographic Data

	E-I	S-N	T-F	J-P
Position				
Length of Time in Position		*		*
Length of Time in CPE Profession		*		*
Age				
Educational Level				
Sex		*		*
Professional Orientation				
Myers-Briggs Type				

*Significant at the .01 level

The chi-square test was not valid for the S-N or J-P variables and position, age, or level of educational achievement because of the large number of cells which contained expected frequencies of less than five.

There were no significant differences among CPE professionals regarding the S-N or J-P variables and position, age, or level of educational achievement.

The chi-square test was not valid for the four combinations of perception and judgment and the demographic variables.

There were no significant differences among CPE professionals regarding the four combinations of perception and judgment and the demographic variables.

Discussion

The majority of survey respondents were directors and the four most frequent Myers-Briggs types were ESTJ, ENTJ, ISTJ, and ENTP. The types with the least representation among directors were ISTP, ISFP, and ESTP. The most frequent type among directors was ESTJ. The majority of INFP, INFJ, ESFP, ISTP, and ESTP types were not directors. Although not at a statistically significant level, this seems to support research that indicates that TJ types are typically the managers and supervisors of the world regardless of the setting (Craig, Craig & Sleight, 1988; Macdaid, 1986; Myers and McCaulley, 1985). Only one of the most frequent types in this sample (ISTJ) coincided with the most frequent types found in a sample of student personnel administrators (Macdaid, 1986) which may indicate that CPE professionals are different from other student personnel administrators in personality type.

In terms of education, the two individuals with post-doctoral study were ENTJ and ENTP. Although the sample was very small, this supports research which indicates that N types are more frequent at higher levels of education, but does not support research which indicates that I types are more frequent (Macdaid, 1986).

There were more females than males in every type except ESTJ, ISTJ, INTP, and ISFJ. Although not at a statistically significant level, this supports research

that indicates there are more STJ males in the general population, but it does not support research showing there are more SFJ females in the general population (Macdaid, 1986).

There were significant differences among CPE professionals in terms of sex and S-N and J-P variables. Females were twice as likely to be N as S, while males were more likely to be S. Males were twice as likely to be J and females were slightly more likely to be J. While the sample was slightly more N than S, the ratio for females was two to one (N:S) which indicates a strong N preference for females and a strong S preference for males. The results also indicated a preference for J regardless of sex.

There were significant differences among CPE professionals in terms of years in current position and the S-N and J-P variables. There were slightly more N than S of those in their current position less than one year, twice as many N as S for those in position one to five years, and slightly more N than S of those in their position six to ten years. Thus, those new to their positions were increasingly more likely to be N than those who had been in their positions longer. There were twice as many P as J of those in their positions less than one year which indicates that those very new to their positions were different from those who had been in their positions for any length of time.

There were significant differences among CPE professionals in terms of years in CPE profession and the S-N and J-P variables. There were more N than S of those who had been in the profession one to five years, six to ten years, and 11-15 years. However, the three individuals who had been in the profession less than one year, and twice as many of those who had been in the profession 16 years or more were S. This may indicate a trend away from S toward N in the last 15 years with the possibility that more S types are coming into the profession within the past year. There were more P among those who had been in the profession less than one year but over five times as many J as P for those in the profession 16 years or more. The ratio decreased to one more J than P for those in the profession one to five years. There was a definite trend toward less J and more P in those new to the profession.

Although not at a statistically significant level, the assistant/associate directors were more I than E which may indicate that the directors prefer to take care of the people tasks and the assistant/associate directors prefer to take care of the planning and internal tasks.

Females in the sample were more T than F which, although not at a statistically significant level, differs from the general population in which there are more F females (Myers & McCaulley, 1985). This may be due to the fact that so many of them were in administrative positions.

The fact that there were no NF career counselors was different from previous research (Macdaid, 1986; Myers & McCaulley, 1985), which indicated that NF types were attracted to counseling. It could be that career counseling is different from counseling in general or that the career counseling positions contained more administrative paper work and did not attract the NF types as much as other counseling positions.

Conclusions

When the 16 Myers-Briggs types were compared to the demographic variables there were no significant differences among CPE professionals. However, when the eight preferences of the MBTI were compared there were significant differences in terms of the preferred perceptive function and the preferred attitude and a few of the variables. Specifically, CPE professionals who were newer to their current positions and newer to the CPE profession were different from those who had been in their positions and in the profession longer.

The shift in preference from S and J to N and P among CPE professionals may be a reflection of the trend in CPE offices away from a strictly placement function to a more comprehensive role. The placement function is a detailed and administrative activity which represents an established order of doing things and a way of getting things settled and finished which are SJ traits. The expanded activities

of the CPE office (career planning, counseling, teaching, etc.) deal with solving problems, change, and learning new skills which are NP traits.

It is possible that many of the administrators have been in the profession and in their positions longer and this would account for the preference for J over P. If this is true, there may be a change in directors in terms of type in the future. It is also likely that P types self-select out of the profession and/or choose not to become directors.

Additionally, female and male CPE professionals were different in their preferred perceptive function with female CPE professionals highly likely to be N while male CPE professionals were more likely to be S. Female and male CPE professionals both indicated a preference for J over P but the male preference for J was much stronger.

Females were more T than F which is not typical of females in the general population but is typical of individuals in administrative positions. If females continue to outnumber males in the profession and more P types continue coming into the profession, the preference for J among CPE professionals as a group could become weaker or shift to P.

Directors, being the majority of the sample, followed patterns for the sample most closely and assistant/ associate directors were most likely to be different from

the sample. CPE counselors were different from counselors in other settings.

Research Question 3

Findings

The chi-square test was not valid for Myers-Briggs type and the six professional orientations because of the large number of cells which contained expected frequencies of less than five.

There were no significant differences among CPE professionals regarding their Myers-Briggs type and any of the six professional orientations.

The chi-square test was not valid for the eight preferences of the MBTI and the six professional orientations because of the large number of cells which contained expected frequencies of less than five.

There were no significant differences among CPE professionals regarding the eight preferences of the MBTI and the six professional orientations.

The chi-square test was not valid for the four combinations of perception and judgment of the MBTI and the six professional orientations becuase of the large number of cells which contained expected frequencies of less than five.

There were no significant differences among CPE professionals regarding the four combinations of perception and judgment of the MBTI and the six professional orientations.

Discussion

The factor analysis that was performed on the 30 questions in the CPE Questionnaire provided validity for the six professional orientations as used in the questionnaire and to the theory that there are distinct work tasks within the CPE profession. Marketing and Teaching were the most reliable orientations with Administration being the least reliable.

The ESTJ, ENTJ, ISTJ, and ENTP types reported liking Administration slightly more than the other 12 types while INTP and INFJ types reported liking it least. Of the eight preferences, E, S, T, and J reported liking Administration more and of the four combinations of perception and judgment, the NF types liked it least. This seems to support previous research (Macdaid, 1986) which indicated that most managers and supervisors were TJ types.

The ENTJ types reported liking Counseling slightly more than the other types and the ISFJ and ESFP types reported liking it slightly less. Of the eight preferences, N types liked it more than S types. This supported findings that N types were attracted to the field of counseling but it did not support findings that indicated F types were attracted to counseling. Macdaid (1986) found that ENFP, INFP, and ENFJ were the most frequent types in counseling samples, and Myers & McCaulley (1985) reported F types as being more frequently attracted to counseling. Perhaps the ENTJ types

in this study preferred counseling but, because of the administrative nature of their positions, they came out T rather than F on the MBTI (11 of the 14 ENTJ types were directors).

Marketing was favored by the ESTJ, ENTJ, ENTP, ENFP, and ENFJ types while the INFJ types reported liking it least. Of the five types who reported liking Marketing most, all were E. This data supports research on sales, marketing, and public relations occupations (Macdaid, 1986).

Teaching was preferred by ESFJ, INTJ, and ENFJ types and ISTJ, INFJ, and ESFP types reported liking it least. Macdaid (1986) found ISTJ, INTJ, ENTJ, and ENFP to be the most frequent types among teachers which, except for INTJ, was not similar to this study. These finding do support research on college faculties that found 70 percent N with some as high as 77 percent N, more F than T, more J than P, and a 50-50 split between E-I (Macdaid, 1986).

Research was favored by ENTJ types and ENFP, INFP, ISFJ, ENFJ, and ISTP types reported liking it slightly less. There did not appear to be any patterns in the present findings concerning this orientation.

Technology was reported to be favored most by ESTJ, ESFJ, ENFP, and ESFP types and least by ENFJ and ISTP types. Samples from Macdaid (1986) found ISTJ, INTJ, INTP, and ESTJ most frequent among computer professionals. The

results of this study contained more E than I which does not support findings by Macdaid (1986) where he found more I than E.

E, N, T, and J reported liking Administration more which was consistent with the TJ preference for administration. The N liked counseling more than S which supported research on counselors. The E liked Marketing more than I which supports the research on sales and public relations. The E and I were the same in how much they liked Teaching which also supports research (Macdaid, 1986).

Marketing and Teaching were liked by respondents regardless of preference which may indicate a shift in focus of CPE professionals.

The NT, ST, and SF generally liked Administration more. It would be expected that the S and T types would like it more according to research (Macdaid, 1986; Myers & McCaulley, 1985) which showed S, T, and J types as administrators.

Conclusions

The findings of this study seem to support research that indicates that people choose and prefer careers, work settings, and work tasks that fit their personality type.

The CPE profession has broadened to include the distinct functions of administration, counseling, marketing, teaching, research and technology. With a few

exceptions (Research where there were no clear patterns; Counseling which was not preferred by F types; and Technology which was preferred more by E types than I types), CPE professionals generally preferred orientations that were reflective of their personality types.

Implications for Practice

Assistant and associate directors were different in type from directors in this study. It could be that the differences complement each other in the management of the office and if this is so, then personality type could be considered in promoting or choosing an assistant or associate director.

Career counselors in this study were different from counselors in general and perhaps this should be taken into consideration when hiring counselors for CPE offices. The duties of CPE career counselors need to be examined in terms of how closely they resemble duties of career counselors in other settings. If the duties are different, this needs to be communicated to applicants for these positions.

Technology was the orientation preferred least by most respondents. However, CPE offices are becoming more dependent upon technology so there may be a need to look for CPE professionals with different personality types who would enjoy the technological aspects of the CPE operation.

Since Teaching and Marketing were preferred most by respondents, there is a need to look at the importance and amount of time spent on these tasks. This could be used as a tool for staff development and to attract professionals to the field.

If more N and P types are coming into the field, yet the typical administrator is a J type, what are the implications for the future? Will the P types self-select out of the profession or not seek the director's positions or will the N and P types become directors. Either way, there may be a need for counseling and/or staff development to assist and prepare N and P types for a career change or for administrative positions.

Recommendations for Further Research

1. There should be more research to examine if frequent types are more competent and/or more satisfied than rare types.

2. Additional research should be conducted to refine and test the reliability and validity of the professional orientations.

3. There should be further research on MBTI types, their preferences for work tasks, and the amount of time spent on the various work tasks.

4. There should be more research to find out how many assistant/associate directors become directors

5. A larger population of CPE professionals should be tested with the MBTI to add to findings of this study.

6. There should be more research on career counselors and counselors in other settings to determine if there are differences in terms of personality type.

7. Additional research should be conducted on CPE professionals who are not directors to determine personality type and preferences for professional orientations.

8. There should be continued research to monitor the trend toward more N and P types and less S and J types coming into the profession.

BIBLIOGRAPHY

Allport, Gordon. (1937). Personality; a psychological interpretation. New York: Holt & Co.

Ambron, Sueann, & Brodzinsky, David. (1982). Lifespan human development. New York: CBS College Publishing.

APT Training Workshop. (1989). Tampa, FL: Association for Psychological Type.

Carlson, John G. (1985). Recent assessments of the Myers-Briggs Type Indicator. Journal of Personality Assessment, 49(4), 356-365.

Carlyn, Marcia. (1977). An assessment of the Myers-Briggs Type Indicator. Journal of Personality Assessment, 41(5), 461-473.

CAS standards and guidelines for student services/development programs. (1986). Council for the advancement of standards for student services/development programs.

Conover, W. J. (1971). Practical nonparametric statistics. New York: Wiley & Sons, Inc.

Corsini, Raymond J. (Ed.). (1977). Current personality theories. Ilasca, IL: F.E. Peacock Publishers, Inc.

CPC. (1988). Career planning and placement survey special report. Bethlehem PA: CPC.

Craig, D. L., Craig, C. H., & Sleight, C. C. (1988). Type preferences of decision-makers: corporate and clinical. Journal of Psychological Type, 16, p. 33-37.

Delworth, U., Hanson, G. R., & Associates. (1980). Student services: a handbook for the profession. San Francisco: Jossey-Bass, Inc., Publishers.

Erikson, E. H. (1968). Identity, youth and crisis. New York: Norton.

Garrison, Karl C., & Jones, Franklin R., (1969). The psychology of human development. Scranton, PA: International Textbook Co.

Ginzberg, Eli, Ginsburg, S. W., Axelrad, Sidney, & Herma, J. L. (1951). Occupational choice. NY: Columbia University Press.

Grant, W. H., & Foy, J. E. (1972). "Career patterns of student personnel administrators." NASPA Journal, 10, (2), p. 106-113.

Havighurst, R. J. (1953). Human development and education. NY: Longman's.

Hirsch, S. K., & Kummerow, J. M. (1989). Lifetypes. NY: Warner Books, Inc.

Holland, John L. (1966). The psychology of vocational choice. Waltham, MA: Blaisdell Publishing Co.

Joseph, M. F. (1984). A comparison of personality types between deans/directors of continuing education and chief academic officers in selected post-secondary institutions in North Carolina. Dissertation Abstracts International,

Jung, Carl G. (1923). Psychological types or the pyschology of individuation (H. Godwin Baynes, Trans.). Great Britain: Pantheon Books.

Jung, Carl G. (1954). The portable Jung. (Joseph Campbell, Ed.). (R.F.C. Hull, Trans.). NY: Viking Press.

Kiersey, D. W., & Bates, M. (1978). Please understand me. Gainesville, FL: Center for Applications of Psychological Type. (check this one out to be sure)

Kroeger, O., & Thuesen, J. M. (1988). Type talk. NY: Delacorte Press.

Lawrence, Gordon. (1979). People types and tiger stripes. Gainesville, FL: Center for Applications of Psychological Type, Inc.

Long, Thomas J., Convey, John J., and Chwalek, Adele R. (1985). Completing dissertations in the behavioral sciences. San Francisco, CA: Jossey-Bass, Inc., Publishers

Macdaid, Gerald P., McCaulley, Mary H., and Kainz, Richard I. (1986). Myers-Briggs Type Indicator Atlas of Type Tables. Gainesville, FL: Center for Applications of Psychological Type, Inc.

Malone, O., Jr. (1988). Psychological type differences between minorities and majorities in an organizational setting. Journal of Psychological Type, 16, p. 15-24.

Martin, Roy. (1980). Writing and defending a thesis or dissertation in psychology and education. Springfield, IL: Charles C. Thomas, Publisher.

McCaulley, Mary H. (1977). Introduction to the MBTI for researchers. Gainesville, FL: Center for Applications of Psychological Type.

McCaulley, Mary H. (1981). Jung's theory of psychological types and the Myers-Briggs Type Indicator. Gainesville, FL: CAPT. Ch. 6 of Advances in Personality Assessment, v. 5, Paul McReynolds, Ed., Jossey-Bass Publishers, 1981.

Myers, Isabel Briggs, & Myers, Peter B. (1980). Gifts differing. Palo Alto, CA: Consulting Psychologists Press, Inc.

Myers, Isabel Briggs, & McCaulley, Mary H. (1985). Manual, a guide to the development and use of the Myers-Briggs Type indicator. Palo Alto, CA: Consulting Psychologists Press.

Norusis, Marija J. (1988). SPSS-X advanced statistics guide, 2nd ed. Chicago, IL: SPSS, Inc.

Papalia, Diane E., & Olds, Sally Wendkos. (1981). Human development. NY: McGraw-Hill, Inc.

Parsons, Frank. (1909). Choosing a vocation. NY: Agathon Press.

Smith, L. D. (1989). Overview of career planning and employment offices. Unpublished paper.

Stephens, Everett W. (1970). Career counseling and placement in higher education: a student personnel function. Bethlehem, PA: College Placement Council, Inc.

SPSS-X users' guide, 3d ed. (1988). Chicago, IL: SPSS, Inc.

Super, Donald E. (1957). The psychology of careers. NY: Harper & Brothers.

Weiss, Robert S. (1968). Statistics in social research. NY: John Wiley & Sons, Inc.

APPENDIX A

CAREER PLANNING AND EMPLOYMENT QUESTIONNAIRE

Career Planning and Employment

Questionnaire

Please check your responses

1. What is your current position?
   _____ (1) Director
   _____ (2) Associate Director
   _____ (3) Assistant Director
   _____ (4) Career Counselor
   _____ (5) JLD Coordinator
   _____ (6) Other _____

2. How many years have you been in this position?
   _____ (1) less than 1
   _____ (2) 1-5
   _____ (3) 6-10
   _____ (4) 11-15
   _____ (5) 16 or more

3. How many years have you been in the field of career planning
   and employment?
   _____ (1) less than 1
   _____ (2) 1-5
   _____ (3) 6-10
   _____ (4) 11-15
   _____ (5) 16 or more

4. What is your age?
   _____ (1) 20-29
   _____ (2) 30-39
   _____ (3) 40-49
   _____ (4) 50-59
   _____ (5) 60 and over

5. What is your sex?
   _____ (1) Female
   _____ (2) Male

6. What is your highest level of educational achievement?
   _____ (1) Baccalaureate
   _____ (2) Masters
   _____ (3) Specialist
   _____ (4) Earned Doctorate
   _____ (5) Post Doctoral

CPE Questionnaire, page 2

Job Functions

The job functions listed below are typical of those found in CPE offices.

Please rank each function according to your preference for actually performing the function yourself - regardless of whether you think the function is important or whether you are presently involved in performing the function.

The responses are on a continuum from 1 to 5, with 1 being "dislike very much" and 5 being "like very much". Please circle your responses.

	Dislike Very Much				Like Very Much
1. Placement of graduates & alumni	1	2	3	4	5
2. Career counseling	1	2	3	4	5
3. Utilizing current career/ job market information	1	2	3	4	5
4. Generating recruiters	1	2	3	4	5
5. Part-time and summer employment program	1	2	3	4	5
6. Computerized signup for interviews	1	2	3	4	5
7. Teaching life/career planning course	1	2	3	4	5
8. Academic advising	1	2	3	4	5
9. Professional research	1	2	3	4	5
10. Testing	1	2	3	4	5
11. Follow-up on students/ employers	1	2	3	4	5
12. Credential service	1	2	3	4	5
13. Staff supervision/ evaluation	1	2	3	4	5

CPE Questionnaire, page 3

	Dislike Very Much				Like Very Much
14. Promotion of services	1	2	3	4	5
15. Conducting workshops for classes/clubs, etc.	1	2	3	4	5
16. Computerization of administrative tasks	1	2	3	4	5
17. Internship/experiential education program	1	2	3	4	5
18. Budgeting	1	2	3	4	5
19. Using video/vcr equipment	1	2	3	4	5
20. Developing faculty rapport/support	1	2	3	4	5
21. Evaluation of services	1	2	3	4	5
22. Using interactive satellite programs	1	2	3	4	5
23. Career development	1	2	3	4	5
24. Teaching academic courses	1	2	3	4	5
25. Job development	1	2	3	4	5
26. Liaison to business/industry/government/education	1	2	3	4	5
27. Publishing articles	1	2	3	4	5
28. Computerized career guidance programs	1	2	3	4	5
29. Conducting resume/job search workshops	1	2	3	4	5
30. Presenting programs at professional meetings	1	2	3	4	5

APPENDIX B

MYERS-BRIGGS TYPE INDICATOR

FORM G

APPENDIX C

LETTER TO CPE PROFESSIONALS

Appalachian
STATE UNIVERSITY
BOONE, NORTH CAROLINA 28608

Office of Career Planning and Employment
(704) 262-2180

LETTER TO CPE PROFESSIONALS

June 30, 1989

Dear :

I am asking you to participate in a research study I am conducting as the basis for a doctoral dissertation involving Career Planning and Employment professionals.

More specifically, the research involves determining the relationship between personality type, as measured by the Myers-Briggs Type Indicator (MBTI), and a preference for specific functions of you job. Your participation involves answering the enclosed MBTI and Career Planning and Employment (CPE) Survey which will take approximately 20-30 minutes. Although you may have taken the MBTI previously, I am asking that you take it again in order to collect current information for this research.

Please answer the MBTI on the enclosed General Purpose NCS Answer Sheet. (Since one sclae on the MBTI is scored differently for males and females, please fill in the sex code on ide two.) You may write answers directly onto the CPE survey. Upon completion, please return the MBTI booklet and answer sheet and the CPE survey in the enclosed postage-paid envelope. The completed materials should be returned by July 17, 1989.

The information gathered in this study will, of course, be completely confidential. No effort will be made to associate particular responses to institutions or respondents. The MBTI answer sheets and CPE surveys are coded in order to match responses for statistical purposes only.

Thank you in advance for your participation. If you would like the results of your MBTI type, please indicate below and I will forward them to you.

Sincerely,

Linda Smith
Assistant Director

_____ Yes, I would like MBTI results.

_____
Signature

APPENDIX D

REMINDER LETTER TO CPE PROFESSIONALS

Appalachian
STATE UNIVERSITY
BOONE, NORTH CAROLINA 28608

Office of Career Planning and Employment
(704) 262-2180

REMINDER LETTER TO CPE PROFESSIONALS

July 19, 1989

Dear :

One June 30, 1989, you were mailed information regarding research I am doing for my dissertation. The information included a Career Planning and Employment Survey and the Myers-Briggs Type Indicator. Realizing that busy schedules and vacations may have kept you from participating, I am sending this reminder to encourage you to complete and return the surveys to me.

If you have already mailed the information, please ignore this letter. If you have not, your participation would be greatly appreciated. As with any research, the greater the response rate, the more reliable the research conclusions.

If you did not receive the information of if you need another copy, please contact me at 704/262-2180 and I will be happy to send you another packet.

Thank you for your consideration.

Sincerely,

Linda Smith
Assistant Director

APPENDIX E

MYERS-BRIGGS TYPE TABLE